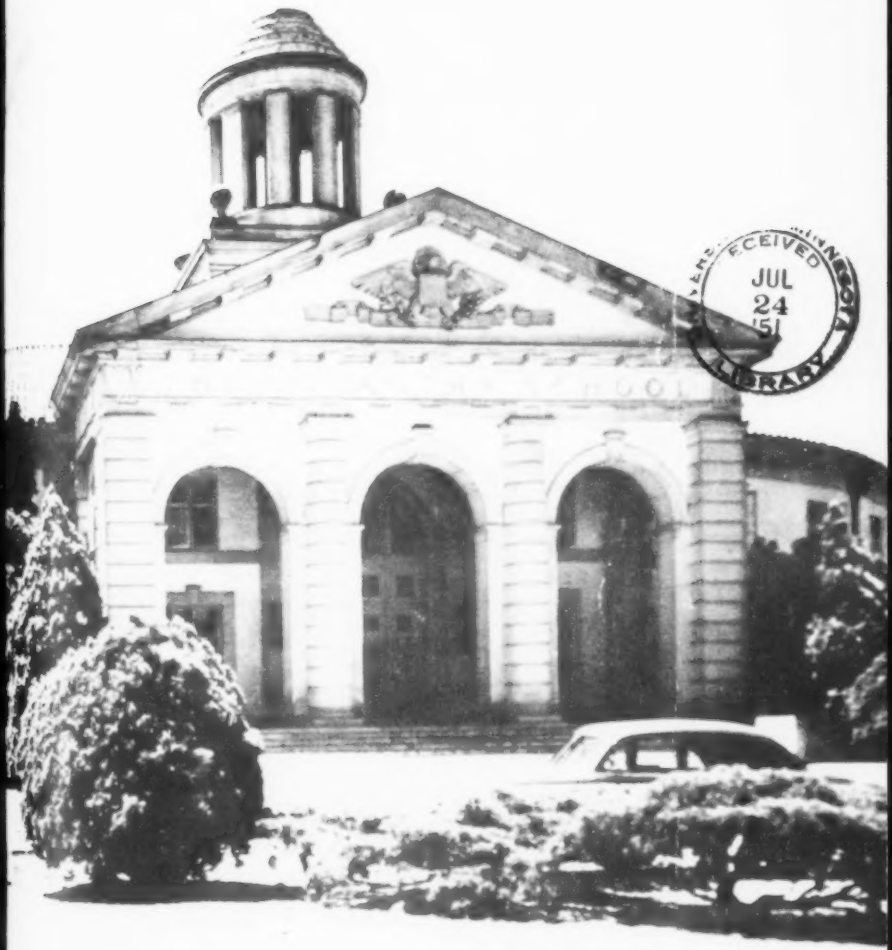
INFANTRY SCHOOL

QUARTERLY

JULY 1951



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THE INFANTRY AND ITS SCHOOL

With this issue, the QUARTERLY appears in a new, slimmed-down format. Paper prices and printing costs have risen to the point where we have had to decide between raising subscription rates or cutting production costs.

We have chosen the latter course and, in the process, have achieved what we think is a more easily handled and more easily read magazine. The shorter type line is more easily scanned and the saddle-stitch binding permits easier handling.

There are 112 pages in this new format as contrasted with 160 in the old. However, with a reduction in type size and smaller page margins, we can print even more words than in our old version of the QUARTERLY.

We hope you like it.

INFANTRY SCHOOL QUARTERLY

The latest thought on Infantry

THE INFANTRY SCHOOL, FORT BENNING, GEORGIA

THE INFANTRY SCHOOL

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THE INFANTRY AND ITS SCHOOL

By MAJ JOHN W. BAUMGARTNER, Infantry

In preparing this article, the author has borrowed heavily from "A History of The Infantry School" which appeared in three issues of The Mailing List *in 1940-41. That history depended for much of its material on a manuscript "History of The Infantry School" written in 1931 by First Lieutenant Leroy W. Yarborough in collaboration with Major Truman Smith and with the assistance of Major Charles A. Willoughby and Major Leven C. Allen.*

More recent factual material was derived from "A History of The Infantry School," written in 1944 by Captain Richard A. Tilden and Private First Class Rosalind Roulston.

* * * * * *

The Infantry School that came to a flourishing maturity during World War II was and is a Titan among service schools. In the years of its existence it has grown great and strong.

But its greatness and its strength weren't developed through a carefully nurtured youth. If ever there was a product of the "school of hard knocks," The Infantry School is it. Like a Jack Dempsey or Babe Ruth, growing up through a rough childhood, The School developed its muscles, developed its punch, while ducking the blasts of its detractors, surviving the famine of an economy-reduced army, and absorbing the blows of disheartening conditions imposed upon it by indifference, neglect, and factional hostility.

As it exists today, The Infantry School in sheer magnitude, in breadth of scope, in research and development, and in its influence in molding the character of the Infantry, probably surpasses anything conceived of in the minds of military thinkers of the past.

In 1940, the *Mailing List*, predecessor of the QUARTERLY, carried a history of The School. In it appeared the following statement, as true now as it was before World War II:

> Today it (the Infantry School) is the vital center of the Infantry, of its progressive thought, of its doctrines, tactics, and methods. It is an important support in the structure of national defense, for Infantry, the preponderant force of modern armies, remains, as always, the decisive power in battle and campaign. There is no extravagant praise bestowed upon The Infantry School when it is said that in its efficiency is a guarantee of national security, for the efficiency of our Infantry will be that of The Infantry School.

The history of The Infantry School, inseparable from that of Infantry, is incomplete without a review of the circumstances that led to its founding. Bright as is the story of American Infantry, it has

passed through periods of anything but flaming glory.

VON STEUBEN

General Washington's troops, individuals all, were a ragtag, bobtail outfit until they felt the influence of Baron von Steuben. This Prussian, an officer of experience and ability, had offered his services to the colonies. His recommendations helped turn a mob of foot soldiers into effective Infantry. Organizing some of the officers of the Continental Army into squads, sections, and companies under his personal direction, he soon developed an excellent group of instructors who carried his precepts to the troops. His method of acquainting newly commissioned officers with some of their duties is still used in a modified form by The Infantry School.

Another of his innovations, using selected troops for demonstration purposes, has also come down to play a prominent part in The School's method of instruction.

By the end of the Revolutionary War, American Infantry had held its own with England's vaunted foot soldiers and the professionals of Hesse. There were enough troops with ground combat know-how to have formed the nucleus of a professional corps that would provide some continuity of military thought and action. But the new Confederation of States, and later the Republic, was as prodigal of its military as it was of its natural resources. With the attitude that "there's more where those came from and we'll probably never need them again anyway," its peoples and legislators allowed its trained forces to melt away under the sunny skies of peace.

WAR OF 1812

What little Army remained, and the Infantry portion of it in particular, lacked unity and spirit. There was no inclination to spend good money producing men who could win battles in an unanticipated future war. The result was, at the beginning of the War of 1812, the Army hastily organized for that emergency was as ill-prepared to pull its weight as it had been at Valley Forge.

The Infantry, pulling itself up by its legging laces, improved a little. In 1813, what may have been the first field manual for American Infantry appeared. Based on French methods, *A New System of Discipline* was adopted in an effort to obtain some uniformity in Infantry training. Two years later, a board composed of Generals Scott and Swift and Colonels Fenwick, Cumming, and Dayton worked out a set of regulations for Infantry. This was the first board constituted to work on Infantry problems.

Again, war's end saw the dwindling away of a trained force. The tiny army that remained was dispersed in small groups stationed in frontier garrisons. What progress occurred in Infantry during the next several decades was the result of nearly superhuman efforts by a few dedicated officers. Most of their names are lost to memory, existing, if at all, only in faded signatures on dusty reports buried a century past in our National Archives.

FIRST INFANTRY POST

One remembered name, that of Major General Edmund P. Gaines, graces the pages of Infantry history. In 1826, that patient officer, long a supplicant for some systema-

tizing of training effort, finally prevailed upon the War Department to establish an Infantry post at St. Louis for the purpose of organizing an "Infantry School of Instruction." With the founding of this post, Jefferson Barracks, the Army had its first honest - to - goodness Infantry School. During 1826 and 1827, the puny bulk of the Infantry was assembled there. The original intent was to train enlisted men, but the principal function soon became training Infantry officers.

Not even surviving infancy, the school faded away in 1828 when the government drained off most of the garrison to attend to frontier wars with the Indians of Missouri, Minnesota, and even back east in Maine.

Halting though it was, this was the first step on the long hard road that eventually led to The Infantry School. The short lived institution at Jefferson Barracks was memorable not only as an ancestor of The Infantry School but because it was a tangible expression of the idea that a regular school was needed to teach Infantry tactics and techniques. Bitter experience had finally taught that few men were born competent foot-soldiers but many could be made.

THE LEAVENWORTH SCHOOL

More than fifty years were to pass before the school idea next took hold. Not even two more wars, in 1848 and 1861-65, revived an academic approach toward training men. Infantrymen were made in battle, if at all.

More realistic military thinkers abroad had promoted staff schools for their armies. These were in the nature of postgraduate institutions and the United States adopted the idea when in 1881 it established the School of Application for Infantry and Cavalry at Fort Leavenworth, Kansas. This school became a mirror of the European staff colleges and eventually evolved into our Command and General Staff College. As much needed as it was, successful as it was, it did little to further the idea of an Infantry School.

And the Infantry was still carrying the bulk of the burden in combat. The Spanish-American War and the Philippine Insurrection saw the employment of few men of the other arms as compared with those of Infantry.

The *Mailing List's* "History of the Infantry School" says:

> Perfection in close order drill, individual marksmanship, the mechanical deployment and advance of linear skirmish lines, and a smattering knowledge of patrolling, were the criteria of good infantry. The machine gun, which had already proved its worth in the Franco-Prussian War, was, to the American Infantry, still a visionary weapon of the future. Every cavalry and artillery officer felt himself equal to commanding Infantry in battle, but guarded the technique of his own branch as a secret which the Infantry mind could not, if it would, penetrate.

And how did Infantry morale compare with that of its sister branches? As well ask how Benning's Kelley Hill compares with Everest.

Not that there weren't crusaders for the Infantry, never-say-die foot-sloggers who preached the gospel of an Infantry School, who begged, pleaded, and cajoled the powers that be for a place in which to develop Infantry ideas and pass them along to coming generations of

companies, and battalions, and regiments that would bear the brunt of future campaigning. But the official attitude towards the idea of schooling the Infantry was about the same as that of a Chinese towards educating a girl-child.

It was 1907 before the Army indulged the Infantry in anything like a school of its own.

THE SCHOOL OF MUSKETRY

Military thought still didn't conceive of an Infantry School of tactics and techniques when in 1907 a School of Musketry was authorized to be established at the Presidio of Monterey, California. It wasn't all that could be desired by the Infantry, but it was a foot in the door — a lot more than the branch had had for a long time.

The School of Musketry developed as a result of Lieutenant General Arthur MacArthur's dissatisfaction with the marksmanship ability of his Pacific Division troops. Throughout his area, California, Oregon, and Washington the skillful individual marksmanship that existed before the Spanish-American War had fallen away despite popular opinion that American marksmen were naturally superior to those of other countries.

From an original plan for building target ranges and finding instructors for an intensive course in marksmanship there developed a school of experiment and theory on the use of the rifle in battle and of improvement by testing in the rifle itself.

Even this was not an Army-wide school but one established for the Pacific Division alone. But General MacArthur had visions of something beyond a mere marksmanship school. In his order establishing the School of Musketry he said, "In the evolution of the school, the scope of the work may take a wider range and include all subjects connected with small arms, ammunition, and tactics."

The next six years saw much of this prospect realized. In the original curriculum there were extensive courses in the practical and theoretical use of rifle, revolver, and machine gun. Every effort was made to develop each student, not only as a marksman, but also, and even more important, as an instructor.

Here appeared the first use of the coach and pupil method of instruction, still the best way the service has found of training marksmen on the firing line.

Here appeared something new in marksmanship training, field firing, where the element of surprise and a consideration of terrain was added to the purely mechanical application that developed from ordinary target practice.

In this training, tactics and fire were combined for the first time in a prescribed course. Elementary and incomplete at first, the training value of this combination was recognized at once and later it was incorporated into small arms firing regulations.

The machine gun came in for considerable study. This weapon's possible value in the future was recognized and machine gun training was intensive both as to theory and practice.

Most startling to observers was the first demonstration of overhead machine gun fire in support of an attacking battalion. The School of Musketry first demonstrated this use of the weapon on 30 September

1909 when machine guns placed a "canopy of fire" over "living Infantry."

By 1910 the War Department was thinking of turning The School of Musketry into an Army-wide service school and was casting about for a more central location to make its services available to units in all parts of the United States. Late that year Fort Sill, Oklahoma, home of the Artillery School of Fire, was first on the list of sites being considered for the new school.

Finally in 1913 the organization, still designated as The School of Musketry, moved to Sill.

In its six-year life at the Presidio of Monterey, the school had done more than turn out competent small arms marksmen and instructors. It had impressed on the War Department the idea that a central institution could do more to promote good instruction, uniformity, and establish standards than would ever be possible under the old system of training all personnel in their own units. There, instruction was too likely to be dictated by the whim of the individual commanders and the quality varied from unit to unit according to the quality of those commanders and their instructing personnel.

The School of Musketry had had little precedent to follow in instructional methods. But using what little theory existed on this subject, together with a knowledge of previous Army training practices, and liberal doses of common sense, a system developed that still influences training methods today.

Bad luck and what, from the vantage point of nearly forty years later, looks like short-sightedness, dogged the School of Musketry at Fort Sill. Hardly had the transfer been made from the California post before American-Mexican relations reached a crisis. Instead of adding impetus to the school, the international unpleasantness brought its operations to a standstill. Not only were no more students detailed to attend its classes, but all its demonstration troops were withdrawn and sent to Texas for possible use on the border.

Despite the fact that the school was not utilized, the War Department didn't disregard it entirely. It was included as a recognized service institution in Army Regulations in June 1913.

The presence of two different arms of the service on one post created difficulties. A general order in September 1913 designated Fort Sill as an artillery post and directed that the post commander be an artilleryman, thereby establishing precedence for the Artillery School of Fire over the School of Musketry.

Dormant for more than a year and a half, the School of Musketry came to life in early 1915. On February 20, the spring term of the school opened with a class of 137 noncommissioned officers.

A War Department general order, published in May 1915, showed the effect of missionary work done by proponents of the school idea. The order stated the purpose of the school was "to train officers and noncommissioned officers for their important duties as fire leaders in battle and to provide trained instructors for regimental schools of practical musketry."

The personnel of the school was to include a commandant, assistant commandant, a school staff of in-

structing and administrative officers, a school detachment of enlisted men, the school troops, and the student body. This was a step to put The School of Musketry really back in business. This organization of the school could provide courses for the following categories of personnel:

1. Field officers of Infantry and Cavalry.
2. Captains and first lieutenants of Infantry and Cavalry (small arms).
3. Lieutenants of Infantry and Cavalry (machine guns).
4. Noncommissioned officers of Infantry and Cavalry (small arms).
5. Noncommissioned officers of Infantry and Cavalry (machine guns).
6. An observation course for general, field and staff officers not belonging to the Infantry or Cavalry.

However, the failure to provide for tactical instruction indicated that as late as that year (1915) the Army still thought its stepchildren, the Infantry officers, rated no more than military "readin', 'ritin', and 'rithmetic." Tactics were for the elite of the glamor services of the day — the Cavalry and Artillery. Even so, the School was a step, if a hesitant one, in the right direction.

Fate sideswiped the School again in 1916 when further Mexican-American difficulties arose. Following established precedent, the student body was dissolved and sent back to its regiments. It was a Standing Operating Procedure that defied logic — when the need for trained men became greatest, training stopped.

One good thing resulted from this latest interruption, however. The instructing personnel remained at Fort Sill and got in some good licks on improvement of instruction. School texts were also brought up to date before official classes were resumed in February 1917.

With the European War already two and a half years old, combat lessons were filtering back to this country. The school's texts — all mimeographed — were carefully revised to reflect this new material.

That first class in 1917, after resumption of activities, was composed of noncommissioned officers who were to get 16 weeks of instruction almost entirely in machine guns. Since no one gun had been adopted by the service, the class was divided into four sections. Each section spent all its time with a single type gun — the Lewis, Benet-Mercier, the Maxim, or the Vickers. The present Browning had not yet appeared.

The curriculum consisted of a long series of firing problems, study of machine gun mechanism, a course in ballistics, and side courses in communication, grenades, reconnaissance, and the use of instruments.

Before the course was completed the war with Germany began on 6 April 1917.

What was to happen to the School of Musketry — dissolve as usual? Sit tight and wait for developments? Or would it finally be put to use?

The answer wasn't long in coming. On 25 April, the War Department said that the school would train competent instructors at the rate of one officer per regular Infantry and Cavalry regiment and would also include courses for National Guard and Reserve officers.

The course for enlisted men would be suspended with the conclusion of the class then in progress.

While the Congress was debating the Selective Service Act, things were at a standstill, but on 12 May 1917, a large group of National Guard officers was ordered to Fort Sill.

On 23 July a letter from the Adjutant General altered the school's role, temporarily, to meet the national emergency. Since the School of Musketry was one of the nation's few existing institutions that didn't have to be organized from the ground up, it had to be utilized to the fullest extent.

The letter ordered a reorganization *and* a change of name. It was to become the "*Infantry* School of Arms." Note that it was to be an *Infantry* School. The Cavalry had dropped out.

This new Infantry School of Arms was to be reorganized into four major departments: small-arms, machine-gun, engineer, and gas-defense. Students were not to take a general course, but were to study one specialty in order to qualify as instructors in that specialty. Only the gas-defense course was required of all students. Courses were to last only one month, except for machine gun, which was to be two months long.

Classes were to be larger (320 officers in each), more instructors were required, and a larger school detachment had to be scraped together.

Almost completely transformed in name, scope, and nature of instruction, the school faced still further changes. The expanded Infantry School of Arms and the Artillery School of Fire were too much for one post. The War Department directed the commandant to plan two schools to take the place of the Infantry School of Arms: one to be essentially a machine gun school, the other to teach all other infantry weapons. The subject of sites for the new schools was not taken up until later.

This was the plan for the school: to teach thousands of instructors in the techniques of the various infantry weapons. But its full potential was still overlooked. No one, apparently, had conceived the idea of using such a school to instruct in the whole field of Infantry. Nowhere was there any mention of the study of tactics.

When the first class assembled at the new Infantry School of Arms, the courses included: grenades, bayonet, musketry, automatic arms, heavy machine guns, and field fortifications. Each student was taught one of the above specialties, and in addition, took a short gas-defense course.

Student officers came from all components of the service: Regulars, National Guardsmen, and graduates of the training camps. Most of them were lieutenants and captains. Nearly all were from the Infantry, but there was a scattering of Cavalrymen.

Courses started at regular intervals for the next year. Between courses there was a two weeks' lapse during which instructors digested the new lessons that were flowing in from the battlefields of Europe, and prepared new texts and problems that were to follow.

It wasn't until July 1918 that any group of students was given a composite course covering all phases of the schools' instruction. At that

time a class, numbering sixty West Point graduates commissioned in Infantry and Cavalry, began a study of the entire curriculum.

During the fall and winter of 1917, military missions from France, England, and Canada added to the staff of the School. Officers and noncommissioned officers, the members of these missions were experts in their individual fields. They did little actual instruction but acted as advisers to the faculty. This contact with foreign instructional personnel was new to both faculty and students. The experience was enlightening and refreshing.

Later in 1918, these foreign veterans were supplemented by American officers back from France with what they had learned in the school of experience.

This Fort Sill school, despite its shortcomings, made itself felt as far away as France. General Pershing ordered several corps schools to be organized overseas, using the Infantry School of Arms as a model.

Upheaval came during the spring and summer of 1918 when the machine gun course was moved to Camp Hancock, near Augusta, Georgia; a marksmanship course was started at a new "Small-Arms Firing School," at Camp Perry, Ohio; and boards were convened and made inspection trips to locate a new site for the Infantry School of Arms.

The Machine Gun School at Camp Hancock grew into a huge affair that not only trained officers in machine gunnery, but trained officer candidates for commissions as first and second lieutenants in machine-gun units. By November 1918, the camp had 32,000 officers and men operating it and attending its courses.

The Small-Arms Firing School was established at Camp Perry, Ohio, because of a lack of anything like a small arms training program at Fort Sill. Range space was lacking there and when General Pershing declared the rifle training of troops in France to be decidedly unsatisfactory, something was done about it. The something was the new school in Ohio. Soon turning out 1,200 officer-instructors monthly, Camp Perry trained 6,000 before the end of the war.

Thus Camp Perry and Fort Hancock are linked with Fort Sill in antedating and shaping what the Army had worked toward for nearly a century and a half — an Infantry School. It was not long until such a school was to be born in Georgia.

The board that had been formed to seek a site for a new Infantry School of Arms was headed by Colonel H. E. Eames. Assistant Commandant of the Infantry School of Arms, he had been in and out of the school picture more than once in the preceding decade. With clear ideas as to what such a site should offer, he was the guiding spirit on the board that eventually chose for the new school a large tract of land south of Columbus, Georgia — the future Fort Benning.

In September 1918, the Adjutant General ordered all personnel, property, and equipment of the Infantry School of Arms moved to Columbus by 1 October. This move, concluded in early October, and directed by Colonel Eames, ended the Fort Sill sojourn of the school.

Jefferson Barracks, the Presidio

of Monterey, Fort Sill, Camp Hancock, and Camp Perry — none had been a model of what an Infantry School could and should be, but all had played a part in developing the thought and illustrating the need for a school for this combat arm.

The next 30-odd years were to see the full flowering of what had been dreamed of, pleaded for, and fought for by advocates of an *Infantry* School.

THE INFANTRY SCHOOL

What was in store for the new school? Launched only after more than a century of effort, was it to have clear sailing? Would history fail to repeat itself? Not this history; not the history of The Infantry School. Further toughening was in store for The School, further hard knocks to be borne by post and personnel and survived only because it was an already tough breed that manned the new camp on the banks of the Chattahoochee River.

Desired by some inhabitants of its civilian neighbor, Columbus, Georgia, and abhorred by others, the camp was authorized to purchase 115,000 acres of land and to handle 30,000 officers and enlisted men.

The hazardous existence faced by the camp was emphasized in November with the signing of the Armistice. Foes of the camp marshaled their forces; its friends prepared for a long, wearing engagement.

Even before the Armistice, in October 1918, previous grandiose ideas for a giant among training camps had been trimmed by War Department directive to plans for a 24,000 man camp. By December, there was a further modification that reduced the planned capacity to 10,000.

On 9 January 1919, the Assistant Secretary of War suspended construction and land acquirement, and directed the salvaging of all materials and construction work, either wholly or partially completed.

Even so, the War Department hadn't dropped the idea of maintaining Benning as a peace-time camp. The commandant and his staff were ordered to assist the general staff to prepare new plans for a peace-time infantry school of 5,040 men and officers and an area of 98,000 acres.

While work went on apace to cut the physical size of the school, other planners were busy making changes that were infinitely more important to the future of Infantry training. There people were engaged in planning the scope — a tremendously broadened scope — for an *Infantry* school.

Mass war-time training had showed many of the flaws in previous training. If the Army was to benefit from the lessons learned from this experience, something had to be done about it in the immediate future. The new Infantry School of Arms was considered the proper instrument to accomplish this end.

The study that followed produced a plan to broaden the character of the school from one dealing primarily with the technique of arms to one that would teach the entire field of Infantry tactics, impart a knowledge of the cooperation of Infantry with other arms, and continue to produce arms experts as well.

But with all the planning, The

Infantry School of Arms existed mainly on hope. Its life hung by a thread so tenuous that only men accustomed to decades of frustration in their attempts to establish a school would have continued even to think about the matter.

A class of West Point graduates, which had enrolled at Benning in December, was graduated in February 1919. This was the first class turned out by the Fort Benning Infantry School of Arms.

Then with the coming of spring, there was a renewal of hope. The Assistant Secretary of War directed a continuation of work on the peace-time plan for the school. This was backed up by an allowance for the expenditure of $9,200,000. Of this amount, $6,600,000 was for construction and the remainder for the purchase of land.

This resumption of building did not catch the post unawares. Major John P. Jones, constructing quartermaster, had interpreted previous orders to salvage the work as meaning to carry on to completion partially finished buildings and to preserve, by painting, buildings already completed. By his daring he risked extreme censure but with the orders to resume work, his adroit interpretation assumed the aspect of clairvoyance and of genius.

Living conditions were something less than ideal at Fort Benning in the early 1920's. This is a set of officer's quarters of that era. It represented an improvement over the tent quarters many families had previously occupied.

Another class of student officers enrolled on 15 March 1919 and the

garrison was augmented by the arrival of the 1st Battalion of the 29th Infantry. Later the entire regiment came to Fort Benning and for many years provided crack demonstration troops for The School.

Early in April, all the component parts of the school were finally assembled at Benning with the arrival of personnel from the machine gun center at Camp Hancock.

At that time, Colonel Eames, who had commanded the new post from its inception, turned over his duties to the new commandant, Major General Charles S. Farnsworth. Colonel Eames remained as executive officer.

The next several months were a see-saw of uncertainty. One month, up would go the hopes of the camp, the next found them plummeting. June and July, in particular, were marked by alternating bright and dim prospects. In June, the commandant was ordered "to spend as much as may be needed" for the procurement of land. On 1 July all construction work and land purchases for Benning were banned.

In June, the War Department recalled Colonel Paul B. Malone from duty with the Army of Occupation in Germany to become Assistant Commandant of the School. He was to act as War Department representative to acquaint Congress with the necessity for, and the objectives of, the school. If that word were not in disrepute, he might be said to have been a lobbyist for an Infantry School.

His job as a liaison officer between the War Department and Congress lasted for eight months. Records cannot show all that he did to promote the school, to induce Congress to see the Army's need for the school, and, eventually, to carry the day in favor of the school.

Going about his work in a business-like way, Colonel Malone first prepared a digest of information relating to the school plan for the members of Congress. He demonstrated the need for an infantry school in the army's educational system by analyzing American casualties during the war. That there were certain deficiencies in training was proved, he maintained, by the fact that, of all casualties, 89% were from the infantry. Whether the Army was to be large or small, he argued, there was an absolute necessity for an infantry school.

While he was arguing, pleading, and proving his points in Washington, the school was not resting. Two classes of noncommissioned officers began three-month courses in July, an officers' class began in September, and the officers' class that had started work in the spring was held over for additional work during the summer and early fall. The result was that when Colonel Malone arrived at Camp Benning with a congressional inspection committee in September, they found a scene of bustling activity.

The War Department appears to have been sold on continuing the school, but Congress still did not indicate whether its judgment would be life or death for the idea.

War Department general orders of 25 September 1919 defined a policy that offered hope. The Infantry was to have its own service school which was to "develop and standardize the instruction and training of officers in the technic and tactics of their arm of the service." The school was to operate under the supervision and control

of the Chief of Infantry, who was directed to draft special regulations for the conduct of the institution.

General Farnsworth, assisted by Colonel Malone, and Colonel Monroe C. Kerth immediately began preparing a draft of the regulations. They were submitted to the War Department in January 1920.

February 1920 was a month memorable in the history of the school. On February 11th, the War Department directed that it be renamed "The Infantry School." Here at last, in small measure, was dignity in the form of a name designating an institution for the Infantry alone.

Then, even more important, on 20 February 1920, Congress approved the plan to retain and develop Camp Benning.

The Infantry School was on its way!

Brigadier General Walter H. Gordon assumed command and guided The School through the next three difficult years.

During the school year of 1920-21 the first prescribed courses of the modern Infantry School were taught.

About 650 regular officers reported for the four classes: the field officers', company officers', and two basic classes. Not all these officers attended the classes, however. The instructional staff of the school was so small that it was necessary to draft some of the prospective students as instructors.

In addition to the regulars, a class of National Guard officers reported in November 1920. This was the first of many classes for this component.

During the autumn, demonstration troops were augmented by the arrival of the 1st Battalion, 83d Field Artillery.

Physically, Benning was primitive. Troops and students dwelt in tents. So did officers and their families. Comfort was something remembered from previous assignments or hoped for for the future. Benning's rains, Benning's mud, and Benning's winter chill were endured — and endured with a spirit and fortitude that will forever be a credit to those infantrymen and their wives and children who led a frontier-type existence in the third decade of the twentieth century.

Despite the hampering effort of this anything but ideal existence, The School itself progressed. Instruction went on, classes came and went, courses were revised and polished, and instructional documents were changed and new ones written.

It was a tough, hardy young school that came out of those years. Blooded through three years of a battle for survival, it had need of all its resilience and will to live during the next few years when economy hit the Army with its haymakers.

Troop strength fell during 1921 when the War Department permitted the discharge of any soldier who wanted to leave the service.

General Farnsworth, who had become Chief of Infantry, wrote in the fall of 1921: "It is becoming increasingly difficult to get personnel, and money, and materials for Benning. This is not because of any opposition to Benning, but because of necessity for economy in the army. The economy is real economy and not simply talk about economy."

This was the prospect that faced

the post in 1921. Things had seemed bad a few months earlier when the Commandant, General Gordon, had written the Chief of Infantry: "We still seem to have the moral support of everyone with us but there is no certainty it will continue if decent accommodations are delayed

Serving along with the 29th Infantry at Fort Benning for many years, the 24th Infantry Regiment was overseas during World War II and for many months has fought as part of the 25th Division in the present Korean War.

much longer. Our troop labor is fully employed. Any additional work necessitates labor being taken from something else. The firing schedules require some 200 men to work on the range. We are fighting

The present Secretary of Defense, George C. Marshall, was a lieutenant colonel, Assistant Commandant of The Infantry School, at the time this picture was taken in 1930.

forest fires on the reservation. Our roads are seriously requiring attention. The question of fuel wood for stoves in officers' and men's tents will soon require considerable details for hauling, sawing, splitting, and delivering." — And still the troop strength had continued to drop.

But, immature as it was, dreary as were its prospects, The Infantry School was beginning to make its influence felt. Friends and supporters began to increase in number. Visiting political and military figures became friends of the lusty young camp. In 1922, General Gordon said, "The more that come, the better. I believe that, as a rule, our visitors become our friends."

This friendship was engendered by respect for the school, a respect that has continued to be earned through more than three decades of existence.

The school year 1922-23 saw an important change in the curriculum. The basic course was dropped. It had been conducted previously for the large number of Regular officers who had come into the army after the war. Now, with most of them having had this course, or its equivalent in experience, it was no longer necessary.

Tactics, during the short life of the school, had assumed an increasing importance. By 1922 studies were divided about equally between classroom and field work. Even so there was still a predominance of emphasis on weapons training. To change this imbalance, in June 1923, The School introduced a ten-day period of field maneuvers into all courses. This eventually turned out to be one of the most valuable features in school instruction. The maneuvers continued for many years, adding proof to the forecast value of increased and improved training in tactics.

While the intangibles of instruction were changing and progressing, the physical side of Fort Benning was developing, also. A permanent plan for the post had been drawn in September 1922. Under this plan a few officers' and noncommissioned officers' quarters were constructed during 1923. A hospital was built, troop labor erected bridges across Upatoi Creek on the road leading to Columbus,

and the exterior of the camp began to lose, a little, its appearance of impermanence.

CALCULATOR

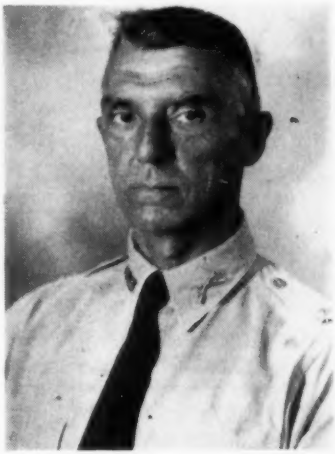
The early days of any institution develop the legends and the legendary characters that people all future reminiscences of its old-timers. The Infantry School had its quota of humans who are remembered for their fabulous exploits or their eccentricities. But no human figure was as well known or as well loved as a mongrel dog who roamed the reservation from 1921 to 1923. Friend of everyone, devoted to no one, only to the Infantry in general, Calculator took complete possession of the garrison. Calculator was a cripple and his name resulted from his mode of travel in which he "put down three and carried one."

Calculator had an uncanny knowledge of the habits of post personnel. He knew where to pick up rides from the post to Columbus and from Columbus to the post. No ceremony was complete without his presence. He accompanied units to the field for their problems, stayed as long as his interest was engaged, and hitched a ride back to the Main Post when bored. He attached himself to no one, accepted food from whomever was handy when he was hungry, and slept wherever he happened to be when he was tired.

Calculator was not so much Fort Benning's dog as Fort Benning was Calculator's post. When he was accidentally poisoned in 1923 his loyal subjects contributed to a granite monument which now stands on the lawn of The Infantry School bearing the inscription: "CALCULATOR, Born ?, Died August 29, 1923. He Made Better Dogs of Us All."

POST ACTIVITIES

Isolated from neighboring Columbus by poor transportation, Fort Benning made its own entertainment. It was, perhaps, one of the most sports-minded communities in the nation. Its officers played polo and rode to hounds. Its football team was so strong that for three straight years, beginning in 1923,



The late General Joseph W. Stilwell was a lieutenant colonel, Director of the Tactical Department, from 1930-33.

it represented the Army in the "President's Cup" competition among service teams. One of the football coaches in 1926 was Major Dwight D. Eisenhower, then an officer with the 24th Infantry Regiment.

All garrison athletic activities were carried on without the support of government funds. A semi-official Recreational Center Board, appointed by the Commandant,

Brigadier General Briant H. Wells, collected money wherever possible, borrowed labor and tools, salvaged material, and scrounged anything it could get its hands on to build one of the finest athletic plants in the service. Pushing the work, planning the work, and encouraging the builders was the Assistant Commandant, Colonel Alfred W. Bjornstad.

eration.

Gigantic cuartels, troop barracks, were built between 1925 and 1929. Not all, but many hundreds of soldiers, moved indoors after years in tents and other makeshift housing.

In 1929 a plan for further post building and improvement was firmed. No deviations from this plan have since been permitted except by authorization of the Secre-

Depression brought a windfall to Fort Benning in the form of WPA and PWA funds. The present Infantry School Building, shown here under construction, was built during that period.

When the Muscle Shoals power project in Alabama was finally abandoned in 1923 its mountains of material were available for salvage. The post fell on this treasure trove and loaded hundreds of carloads of cement, hardware, doors, windows, and every other conceivable sort of building material to be shipped to Benning. Part of these materials went into the present football stadium, Gowdy Baseball Field, a swimming pool, and a post theater. Volunteer soldier labor did all the work. The results, standing today, are a tribute to the willingness and energy of those hardy, handy forebears of the present Infantry gen-

tary of War, later Secretary of the Army.

And The School progressed. More and more tactical training crept into the curriculum. In the 1926-27 academic year the scope of instruction was broadened. The advanced course was redesigned to train Infantry field grade officers and senior captains as commanders of tactical units to include the reinforced brigade, and as regimental and brigade staff officers.

The company officers course was to train junior captains and lieutenants as company officers and battalion and regimental staff officers.

Tactical instruction was conducted primarily on the terrain itself. An encampment period added to the courses permitted the conduct of nine command post exercises.

Instruction in the technique of fire of all Infantry weapons was followed by a series of combat exercises to emphasize combat use and principles of these weapons.

The Chairman of the Joint Chiefs of Staff, General Omar N. Bradley, was a major, heading the Weapons Department of The Infantry School, from 1930-34. As a brigadier general, he was Commandant of The School, 1941-42.

Administrative and command and leadership courses were added to the company officers' course.

The advanced course now began to include military history. Students prepared monographs on combat actions in which they had had personal experience, or on studies of past campaigns which pointed up teachings of The School.

The year 1928-29 saw an innovation — the study of methods and doctrines of foreign armies. American Infantry thinking was going beyond insular bounds and starting to encompass the entire world of infantry.

The commander of the tank battalion stationed on the post conducted instruction in tank warfare. By 1930-32 the experiences of World War I had crystallized into a planned program of instruction that covered everything from battle tactics to feeding the horse. Over 5,000 officers of the Regular Army, Reserve, and National Guard had graduated from Infantry School courses and were carrying its teachings to all corners of the service.

Truly, The Infantry School was progressing to the point where its graduates were possessed of a military education that was well-rounded and let them stand, at least, on an equal footing with the trained officers of other branches.

The effectiveness of this training is reflected in the large number of Infantry officers, graduates of The Infantry School, who attained high command during World War II.

ASSOCIATED ARMS

Benning had had an airfield almost from the beginning. Named Lawson Field in 1923, it was the home of a flight from the 16th Observation Squadron whose mission was the furtherance of instruction at The Infantry School. Working with the squadron, The School now directed attention to the perfection of the techniques of air-ground liaison, reconnaissance, smoke-screen laying, radio direction of artillery fire, tow-target, and photographic reconnaissance, as they applied to Infantry.

In 1932, the Tank School, which was under the Chief of Infantry but which up to that time had been stationed at Fort Meadé, Maryland, was transferred to The Infantry School. This had resulted from a report by Major General Stephen O. Fuqua, Chief of Infantry, who had said: "The tank has long been recognized as one of the important Infantry weapons. For that reason its characteristics, tactical employment, powers and limitations must be understood by all Infantry officers, and the knowledge will become general only when the tank and its armament are treated at The Infantry School exactly as are the other Infantry weapons."

This odd-looking contrivance is the grandfather of present antitank weapons. A 37-mm gun, it was tested at The Infantry School before World War II. Working with the Infantry Board, The Infantry School listed equipment-testing as one of its important functions.

DEPRESSION

When the depression hit the rest of the country, The Infantry School continued to prosper. In the tremendous "make work" program of the national government, Benning received over $6,000,000 for construction that had been hoped for but not anticipated as a possibility for many years to come. During the depressed '30's, hundreds of CCC personnel and many PWA and WPA laborers added such needed structures as a new radio building, new NCO and officer quarters, an incinerator, a guardhouse, a chapel, hangars for the air corps, a heating plant, tank shops, barracks for the 24th Infantry, ordnance shops, a veterinary hospital, bachelor officers' quarters, a large printing plant, a street lighting system, and the present magnificent Infantry School building.

THE APPROACHING TEST

In the latter part of the 1930's the Army as a whole was about to break out of its cocoon. Mechanization was being thought about and

planned on; organization was being experimented with. The Infantry School was directed to test a new infantry regimental organization with the 29th Infantry, only war-strength regiment in the service. The new semi-automatic rifle was

One of the great ground-gainers of World War II, General George S. Patton, a colonel at the time this picture was taken, served with and later commanded the 2d Armored Division, activated and trained at Fort Benning.

in the offing, and in 1937 and 1938 the 29th was stripped of the revered model 1903 Springfield and equipped with the new M1.

The School reflected these changes. The new Regular Course, for Regular Army officers, begun in 1934, was designed to train officers in:

(1) Tactical duties, both command and staff, to include the Infantry division.
(2) Tactics and techniques of other arms.
(3) Combined employment of other arms.

Other changes were less marked, but the world situation was growing increasingly tense. That Infantry was aware of affairs beyond its own domain is borne out by a 1939 recommendation of the Infantry Board, concurred in by the Assistant Commandant, to the Chief of Infantry, suggesting the initiation of a program for training radio operators and tank mechanics in large numbers.

With European blitzkrieg only months away and reports already rife concerning mechanization of

Once a part of The Infantry School, the Tank Department instructed students in tanks of this type just before World War II.

Axis armies, a 52-hour motor course was added to the Regular Course in 1939.

An Advanced Communication Course made its appearance. Other courses placed increased emphasis on aerial photograph and map-reading, and on command and leadership. The Infantry School

was moving into the last troubled years of peace.

With funds limited, with hope still existing that this country would be spared the suffering resulting from participation in a war, Infantry School leaders realistically prepared for what might come.

West Point classes, such as this one practicing a river crossing, have long been prominent in Infantry School Courses. The first class graduated from Benning's new Infantry School of Arms, in 1919, was made up of West Point graduates.

Through the early days of the war of nerves, on through the period of the "Sitz-krieg" after the conquest of Poland, The School was increasingly aware that it was approaching a period of destiny — a crossroads in its history. If war should come, the Infantry, for the first time in American military history, would have a school of its own. Would it be able to justify its existence? Would its peace-time product stand up to the tasks of a modern war? Would it be able to turn out hurriedly a never-ending stream of competent, well-trained officers and enlisted specialists to man the cadres of a gigantic army?

The period of test was coming.

THE TEST

How was it to meet the challenge of turning out vastly increased numbers of graduates? One method was directed on 6 June 1940 by Major General George A. Lynch, the Chief of Infantry, when he ordered all nine months' courses cut to three and one half or four months. Further, as each short class graduated, it was to be followed immediately by another one. Even before these short classes started, however, all courses were further cut to 13 weeks. The 1940-41 plans called for the following courses:

Rifle and Heavy Weapons Company Officers' Class, to consist of

400 students. The first class was to start on 18 August, the next on 18 September, the third on 13 December, with one class beginning each month thereafter so that three classes would be in session at all times. Effective with class 10, which was to report in June 1940, the strength of each class would be reduced to 200, but the number of classes would be doubled, resulting in six classes in session at one time. This of all the planned courses, was intended to turn out the largest number of students.

Battalion Commanders' and Staff Officers' Class, opening on 9 October 1940, with one a month thereafter.

Officers' Communication Class, opening 9 October 1940, with one a month thereafter.

Thousands of enlisted graduates have carried Infantry School teaching principles to all parts of the service.

Officers' Motor Maintenance Class, opening 20 November 1940, with the second class to open 20 April 1941, and, beginning in August 1941, one class a month thereafter.

Enlisted Radio Operators' Class, opening 14 October, with a class every six weeks thereafter.

Enlisted Motor Mechanics' Class, opening 10 July 1940, with five classes reporting every three

Infantry techniques taught at The Infantry School have been applied in all parts of the world, in all types of terrain, and under all conditions of climate.

months through the fall and winter, jumping to three classes per month, beginning in May 1941.

World War II instructional demonstrations were rugged and realistic. The staff sergeant on the ground is William R. Wright, bayonet-fighting demonstrator throughout the war. He is now artist-illustrator for the Quarterly.

By the late spring of 1941 there were 26 classes in session, with a student body that fluctuated in the neighborhood of 3,200, more than half as many students as had been graduated in the first decade of

These World War II soldiers demonstrate the coach and pupil method of marksmanship instruction. First developed at The School of Musketry, Presidio of Monterey, it is the best system yet devised for marksmanship training.

The School's existence.

More building was needed, authorized, and begun.

More school troops were needed. Since the elimination of the Infantry brigade, instruction in The School had been based on the triangular division and the reinforced regimental combat team. It was, therefore, essential that students be given an opportunity to see and work with such a team. Artillery units arrived. So did troops of the engineers, ordnance, quartermaster, and medical corps.

A new division, the 2d Armored, was activated at Fort Benning, although the Armored Force was soon to take over tank instruction in a school of its own at Fort Knox. In November 1940 the Armored Force School was activated but the 2d Armored Division remained at Benning two more years.

With even greater expansion in prospect through 1940-41-42, plans

Tanks and artillery support the advance, but riflemen lead the way to the enemy. These Infantrymen, attacking the Japanese on Bougainville in World War II, illustrate a technique taught at The Infantry School.

were made to acquire more land. Speculators and canny landowners eventually forced the government to purchase most of the needed acreage through condemnation proceedings.

Meanwhile, another major unit, the 4th Infantry Division, was activating and training at Benning.

With so many large organizations and a greatly expanded school on hand, reorganization of the school headquarters became necessary. Until the fall of 1940 the Infantry School Detachment had operated both post headquarters and The School, administering all units on the post and providing instruction in The School.

On the 15th of October, The Infantry School was separated from the post and made an exempted activity under the direct supervision of the Chief of Infantry.

Parachute training began at Fort Benning in 1940. Airborne graduates of The School fought in all theaters during World War II. This is a combat photograph of elements of the 503d Parachute Infantry Regiment dropping on Corregidor.

On 6 January 1941, the Infantry School Service Command was activated, superseding the Infantry School Detachment, which had been a part of the organization of the school ever since it had been located at the Presidio of Monterey. The Student Training Battalion became the Student Training Units, commanded by Colonel Sevier R.

Tupper. (Colonel Tupper, today, commands The Student Training Brigade.)

By 15 February 1941, post strength stood at 40,000.

In January of 1941, the Automotive Section started to balloon. The War Department authorized a progressive increase in the capacity of the section until it would have 5,000 officers and enlisted men completing the 12-week course annually.

March 1941 saw a change in commandants. General Courtney H. Hodges, later to become Commanding General of the mighty First Army in Europe, moved from Infantry School Commandant to Chief of Infantry and his successor, Brigadier General Omar N. Bradley, came to Fort Benning.

It was about this time that parachute training began to emerge from the experimental stages. Not a new concept, for Benjamin Franklin had considered the possibilities of balloon-transported armies, airborne training was a far cry from the curriculum of the old School of Musketry. Here was proof positive that The Infantry School had reached a high estate when it was intrusted with the training of troops for vertical envelopment.

Shown during an inspection tour of the VII Corps area near the Siegfried line in 1944 are General George C. Marshall, Chief of Staff, Major General J. Lawton Collins, VII Corps Commander, and Lieutenant General Walter Bedell Smith, SHAEF Chief of Staff. General Marshall was at one time Assistant Commandant of The Infantry School and Generals Smith and Collins were instructors.

In May 1941, the Army had only one parachute battalion, the 501st which had been activated at Fort Benning in October 1940. Three more were scheduled to be activated by November 1941 and The School prepared to train 1,400 parachutists a year. On 10 July 1941, the Parachute Section, The Infantry School, was organized and operated as a part of The School until May 1942 when it was activated as a separate unit and detached from The School.

In the 1920's he was an Infantry officer and football coach at Fort Benning. In this post-World War II photograph, General of the Army Dwight D. Eisenhower was Chief of Staff, United States Army.

OCS

July 1941 saw the beginning of what was to be one of the major training accomplishments of this, or any other, war. The Infantry School opened its first Officer Candidate Course. Between that first class and the last Infantry Officer Candidate Class, graduated on 9 December 1946, The Infantry School was to train for commissions 66,141 second lieutenants of Infantry!

By the summer of 1941 reserve lists had been combed of nearly all available junior officers. More were needed, needed badly, and needed in a hurry. Plans for training candidates had been in the mill for more

than a year when the first class opened.

The training had been planned with two ends in view: first, to qualify each candidate as a competent small unit combat leader, and, second, to qualify him as a competent military instructor. To accomplish these ends it was not only necessary to train each candidate in the various fields of military science and tactics, but also to train him in the methods by which he could train others. To effect this, much training was conducted by the candidates themselves. Not only was the coach and pupil method used in the study of weapons and in other fields, but all drill and physical exercise were conducted by the candidates, under the supervision of instructors. In most periods of practical work, including terrain and field exercises, the students were organized into tactical units under officers selected from among their own members. This policy familiarized each candidate with the duties and responsibilities he would ultimately assume and also gave him practical experience in command and leadership.

Introduction of the maneuver enemy, "Aggressor," added realism to Infantry School instruction following World War II.

The peak load of Officer Candidate classes occurred from 28 September 1942 to 27 December 1942 when an average of 69 classes were undergoing instruction. Enrolled in these classes were 14,309 candi-

dates of whom 12,469 eventually were commissioned.

The OCS story deserves a book of its own. The administrative task alone was stupendous, but equally as difficult was the problem of inculcating in young Americans, relatively untrained in military arts, enough of the knowledge, and the ideals, and the concepts of leadership to let them take their place in a combat team that could defeat the best a long-trained enemy could muster against it.

That The School succeeded magnificently is history.

At the beginning of the Korean War, The School wrote, edited, and printed a manual on the 3.5-inch rocket launcher (shown above) and put it aboard a plane for the Far East in only five days.

The basic precept of the task was to determine, in the brief time allowed for observation, whether each candidate did or did not measure up to standard, and to consider that the loss of a potential

officer affected only one individual, while the selection, graduation, and commission of one incompetent officer could be disastrous to many individuals. There were few incompetent graduates.

Weapons, such as this 57-mm recoilless rifle, are tested, studied, and taught at The Infantry School.

This fact is borne out by reports from all theatres. One major general paid the school and its officer candidate product an especially fine tribute when he said: "I can tell you that wherever young Benning graduates have been used, I have heard nothing but praise. Just the other day someone told me that Benning seems to put something into the spirit of its graduates, even during the hurry-up war period, that makes them stand out as exceptionally well-qualified."

PEAK OPERATIONS

Through these years The School continued the mass production of enlisted and officer specialists and

officers qualified for battalion and regimental command and division staff duty. An idea of the tremendous load is conveyed by the following figures, current in December 1942:

Course	No. of classes in session	No. of Students
Officers' Advanced Class	3	600
Division Officers' Class	1	273
Communication Officers' Class	3	330
Motor Maintenance Officers' Class	3	330
Cannon Company Officers' Class	1	50
Enlisted Radio Operators' Class	3	300
Enlisted Motor Mechanics' Class	9	900
Officer Candidate Class	72	14,400
		17,183

To instruct these myriad students the Staff and Faculty of The Infantry School totaled 8,498 officers and enlisted men.

Even this was not the peak, however. That came the following month in January 1943.

Throughout the war, changes continued to be made in the curricula of all courses. As reports came back from the war theatres, they were evaluated and new instruction was designed to qualify personnel for the situations that would confront them in combat.

For instance, reports came in that troops were not "tough enough" in actual combat. To correct this deficiency, conditions were introduced in instruction approximating those prevailing in combat. Problems and demonstrations assumed a more realistic atmosphere. Infiltration courses were devised and all students were qualified on them. The closest attention was given to courses on leadership and physical conditioning was stressed for both officers and enlisted men. New problems and demonstrations, developed from lessons learned in the conflict, appeared in the program of instruction.

Modern warfare calls for modern equipment. New equipment requires up-to-date instruction. Infantry School students work with and learn to use such new and deadly weapons as this flame thrower.

As the requirements for junior officers decreased, the Officer Candidate Courses were cut. At the same time the capacity of the Officers' Advanced Course and Officers' Basic Course was increased. In July 1943, the number of Advanced students jumped from 600, enrolled at one time, to 1,800. The Basic Classes at the same time totaled 1,000 students.

Major General Leven C. Allen had followed Brigadier General

Omar N. Bradley as Commandant. He, in turn, was succeeded in September 1943 by Major General Charles Hartwell Bonesteel, back from command of United Nations Forces in Iceland.

formerly Commanding General of the 36th Division in the Mediterranean Theatre, assumed command of The Infantry School.

During the last three months of 1944 enrollment fell off more rapid-

Always mindful of mobility, The School has done much to enable Infantry to deliver its punch faster. This jeep-mounted 75-mm recoilless rifle resulted from School recommendations.

TAPERING OFF

As the combat divisions filled up, trained, and moved overseas, there were fewer officers to be trained and school enrollment dwindled through 1943 until at the end of the year only 8,518 were in attendance.

After this leveling off, The School continued to operate at what was a reduced rate, considering the tremendous pace set in 1942 and early 1943.

In July 1944, Major General Bonesteel departed the post and Major General Fred L. Walker,

ly as more and more units left for the combat theatres. By this time Infantry School graduates were on every continent and in almost every land on the face of the earth.

The reputation of The Infantry School as one of the world's greatest institutions for military education and the development of military leaders was firmly established. The original conception of the school as an establishment to improve marksmanship had broadened through the years to include four principal missions:

To teach the tactics and technique of Infantry, with emphasis on practical instruction directly applicable to training and leading combat units.

To furnish a working familiarity with the tactics and techniques of associated arms.

To train selected officers and enlisted men for special technical duties in the Infantry division.

To serve as an agency of the Commanding General, Army Ground Forces, in the development and perfection of Infantry tactics and technique.

With victory in prospect on every front, School enrollment continued to drop through 1945. When the end finally came, there was the inevitable change, the transition from war-time to peace-time policies and activities.

POST WAR

No longer was the emphasis on training pointed to defeating a specific enemy. Safety again became paramount in demonstrations and exercises. Much of the live firing ended, infiltration courses were discontinued, and prescribed safety regulations again became the law of The School.

New courses appeared. Among those added were four resulting from war-time developments and inventions. They were concerned with: Tactics and techniques of self-propelled weapons; tactics and techniques of recoilless weapons; maintenance and use of the Infantry liaison plane; and use of the GR-6 (sound-ranging and locating set) in counterfire activities.

Students were oriented on duties peculiar to the Army of Occupation. There were refresher courses for general and field grade officers, who had been prisoners of war, to bring them up to date on changes that had occurred during their enforced absence.

The Infantry OCS course gave way to an Army OCS whose graduates were assigned to various branches of the service according to quotas set up by Headquarters, Army Ground Forces. This course was phased out in November 1947, its mission already having been assumed by the Army Ground General School at Fort Riley, Kansas.

With the great bulk of the war time forces now returned to civilian life, the continuing military education of members of the Reserve and National Guard again became a major concern of The Infantry School. Army Extension Courses were revived. The School planned and began work on a complete new program of extension course instruction, with entirely new instructional material.

An Infantry Conference, under the direction of the Commandant, The Infantry School, was held from 10-22 June 1946, at Fort Benning, to discuss Infantry organization, equipment, and techniques in the light of what had been learned during the war. All these subjects were controversial and opposing views were heard, deliberated, and conclusions reached concerning them. Most of those conclusions serve as the basis for Infantry doctrine as developed and taught at Benning during the post war years.

In November 1946 the Airborne School was inactivated as a separate organization and again came under the command of The Infantry School.

A broadened mission was given The School:

1. To develop leadership in all ranks.
2. To instruct, train and test *selected EM* for the purpose of qualifying those suitable for commission in the Infantry and other arms and services of the Army of the United States. (This mission was concluded with the phasing-out of the Army OCS Course.)
3. To develop and standardize instruction and training of Infantry Officers in techniques and tactics of Infantry, emphasizing practical instruction applicable to training and leading combat units.
4. To instruct, test, and qualify enlisted men and officers in airborne training.
5. To furnish a working familiarity with the techniques and tactics of associated arms, in coordinating the tactical employment of the combat team.
6. To train selected officers and enlisted men for specialized technical duties necessary to the operation of Infantry units.
7. To serve as an agency of the Commanding General, Army Ground Forces, in the development and perfection of Infantry tactics and techniques; to prepare and revise training publications, army extension courses, instructional manuals, and other publications; to conduct research relative to improvement of the Infantry; and to disseminate to the service information pertaining to instruction and training conceived and in use at The Infantry School.

To this mission, in 1947, was added instruction in staff duties to include Infantry and Airborne Division General Staffs. (This formerly was a function of the Command and General Staff College, at Fort Leavenworth. It continued as a mission of The Infantry School for two years and then, as a result of the Eddy Board Report on Service Schools, was later resumed as a mission of the Leavenworth School.)

This platoon leader, receiving an attack order from his company commander, illustrates one phase of troop-leading taught at The Infantry School. This scene is taken from one of the numerous training films produced at Fort Benning since World War II.

The year 1947 also saw the passing of the horse, an event deplored by many. All Infantry School mounts were sold at auction on 13 August 1947.

These post-war years have been active. Adjustment has been continuous but the basic objective of the Infantryman, to close with and capture or destroy the enemy is still the guiding principle in all

instruction. The fact that the foot-soldier now has 24 weapons to assist him in his task makes his job more complicated and technical. Infantry School courses cover all aspects of Infantry's task. Plans for the following courses for the remainder of this year indicate how comprehensive this responsibility has become:

FOR OFFICERS

Advanced Course (two of these will run concurrently for 30 weeks; designed to provide advanced Infantry training for officers so that they are thoroughly grounded in the duties and responsibilities appropriate to field grade Infantry officers).

Associate Advanced Course (a 15-week condensation of the Advanced Course, primarily for officers of the civilian components).

Associate Infantry Company Officers' Course (15 weeks; to produce company grade officers well-grounded in the fundamentals and techniques of all Infantry units with emphasis on the development of capable company commanders).

Motor Transportation Course (a 10-week course to train company grade and warrant officers as maintenance and transport officers in the Infantry regiment. Open to all components.)

Infantry Officers' Communication Course (a 15½-week course for company grade officers of all components).

Field Grade Officers' Refresher Course (4 weeks).

Company Officers' Refresher Course (4 weeks).

FOR ENLISTED MEN

Officer Candidate Course (22 weeks).

Light and Heavy Weapons Infantry Leader Course (14 weeks).

Intelligence and Reconnaissance and Operations Chiefs Course (11 weeks).

Unit Automotive Supervision Course (10 weeks).

Infantry Enlisted Communication Course (17 weeks).

Infantry Sound Ranging Course (5 weeks).

Infantry Radio Maintenance Course (18 weeks).

FOR OFFICERS AND ENLISTED MEN

Airborne Course (3 weeks).

Pathfinder Course (5 weeks).

With the Korean War now many months old, The Infantry School has not yet swung into high gear but it has stepped up its activities enormously and is prepared to go all out whenever it receives the word to do so.

Student enrollment has more than tripled during the last several months; courses have been accelerated; and Infantry OCS is again in operation; sound ranging, I&R and Operations Chiefs Courses have been added; and most of the new training publications have been distributed. The School has met all its commitments thus far and stands ready for what may come.

THE FUTURE

The Infantry School is now in the full vigor of maturity. Unwanted in its infancy, kicked about from pillar to post in its childhood, it has endured adversity, survived disaster, developed strength from its long period of trial, and now stands as a main pillar of strength in the nation's defense structure.

Recognized by civilian educators

for its advanced training methods, the attitude of men who have made education their lifelong business is summed up in the comments of two distinguished educators during World War II. After observing Officer Candidate training, Dr. James Grafton Rogers of Yale declared: "The Infantry School is simply magnificent!" Professor Warren A. Seavey of Harvard Law School wrote, "I had not supposed that an Army School could be so good, and I am somewhat chagrined that, in spite of an entire life spent in studying educational methods, I am not able to suggest anything which would appreciably affect the quality of the work."

The nation at large has been able to obtain an accurate insight into the progress being made at Fort Benning through the medium of Joint Civilian Orientation Conferences. These conferences are attended by top-ranking civilian leaders of all phases of American life. They have been most lavish in their compliments on the conduct and standards of The Infantry School.

Not a "push-button" weapon, but an approach to that possible future era, is this sniperscope whose use is taught at The Infantry School. This instrument, attached to a carbine, electronically translates invisible infra-red rays into visible light allowing the sniper literally to "see in the dark."

The armies of friendly foreign nations send many officers to The Infantry School. Some of these make short orientation visits while others attend as students of the regular courses. Now that there is no longer a Chief of Infantry in the

Army, The Infantry School is the guardian of the Infantry, the fountainhead of Infantry knowledge, a Mecca for Infantrymen, an institution that Infantry long needed, and that has long since proved its worth to the service and the nation.

All who have known its struggles and successes, who have taught or studied its courses, and who have seen its effect on American Infantry join in wishing, "Long life to The Infantry School!"

INFANTRY SCHOOL COMMANDANTS

Colonel Henry E. Eames	1918-19
Major General Charles S. Farnsworth	1919-20
Brigadier General Walter H. Gordon	1920-23
Brigadier General Briant H. Wells	1923-26
Brigadier General Edgar T. Collins	1926-29
Brigadier General Campbell King	1929-33
Brigadier General George H. Estes	1933-36
Brigadier General Asa L. Singleton	1936-40
Brigadier General Courtney H. Hodges	1940-41
Brigadier General Omar N. Bradley	1941-42
Major General Leven C. Allen	1942-43
Major General Charles H. Bonesteel	1943-44
Major General Fred L. Walker	1944-45
Major General John W. O'Daniel	1945-48
Major General Withers A. Burress	1948-51
Major General John H. Church	1951-

INFANTRY SCHOOL ASSISTANT COMMANDANTS

Colonel Henry E. Eames	1919-19
Colonel Paul B. Malone	1920-22
Colonel William H. Fassett	1922-23
Colonel Alfred W. Bjornstad	1923-25
Colonel Frank S. Cocheu	1925-27
Lieutenant Colonel George C. Marshall, Jr.	1927-32
Colonel Charles W. Weeks	1932-36
Colonel Walter C. Short	1936-37
Colonel Charles F. Thompson	1937-38
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Colonel Withers A. Burress	1941-42
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Brigadier General George Honnen	1950-

RIFLE COMPANY AS SUPPORT OF AN ADVANCE GUARD

By Maj ROBERT G. KIMBALL, Infantry

Assembled in the dayroom, B Company's officers and noncoms were ready for one of the many off-duty classes being conducted throughout the regiment.

Captain Wise, the "old man" himself, was the instructor — evidence of the importance attached to the subject of the evening.

As the captain spread his notes, a hush fell and he became the focus of attention.

"Had experience not taught our ancestors a proper regard for security during movement," Wise began, "hardly a prairie schooner would have crossed our Great Plains. Our pioneer forefathers, confronted by some of history's finest light cavalry, the Plains Indians, would have been killed almost to a man — and woman and child.

"As it was, plenty of them died, but good scouting — good reconnaissance — good security brought the majority of our wagon trains to a Promised Land of rich, fertile, virgin soil and helped build our West. It was smart security during movement that did the trick.

"Sometimes — and some of our Korean losses are proof — we've neglected this security and disaster has resulted.

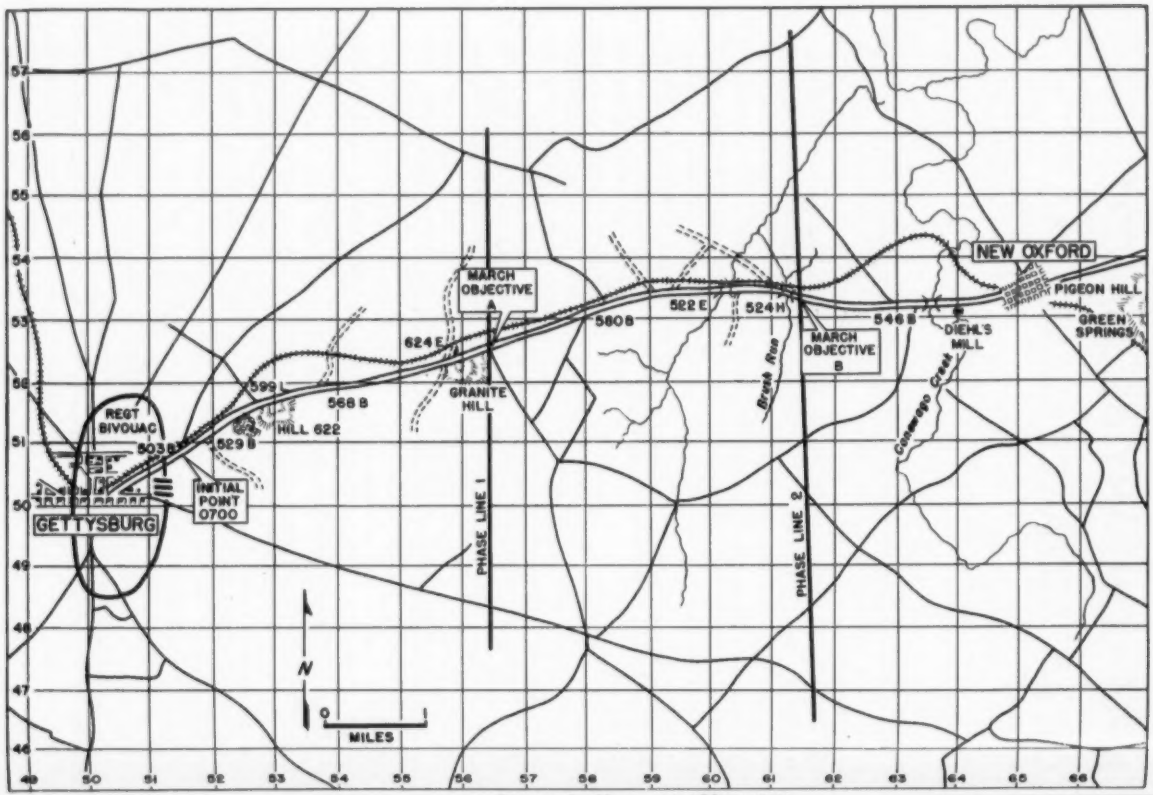
"Tonight, we're studying one rifle company's part in protecting the movement of — let us say — a division. We'll cover the *rifle company in support of an advance guard*. And we'll make the advance guard a battalion.

"To set the stage for this instruction we might, properly, consider the phases of movement — movement when contact with the enemy is remote, movement when contact is improbable, and then — when precautions are most needed — movement when contact with the enemy is imminent. Since, however, a general consideration of these phases of movement are presented in our field manuals and other publications, we shall get immediately at the meat of tonight's problem. We'll go into a detailed discussion of our missions and actions as support of an advance guard battalion.

"What," Captain Wise asked, "do you think our mission is as support of an advance guard battalion?"

After his usual pause to keep his audience alert, he turned to one of his platoon leaders. "Lieutenant Hackaby, will you give us your thoughts?"

"I believe," Hackaby said, "that our mission would be to secure the


MARCH OBJECTIVE
NEW OXFORD
PIGEON HILL
GREEN SPRINGS
DIEHL'S MILL
MARCH OBJECTIVE B
624 E
580 B
522 E
524 H
546 B
599
568 B
HILL 622
529 B
503 B
REGT BIVOUAC
INITIAL POINT 0700
GETTYSBURG
GRANITE HILL
PHASE LINE 1
PHASE LINE 2
Bermudian Creek
Conewago Creek
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0
1
MILES

battalion against any surprise and enemy actions from the front. Also, we would have to more or less blaze the trail if necessary."

"Not bad," said the Captain. "Our job will be, as you say, to protect the battalion against surprise and enemy ground action to the front. We also must prevent any unnecessary delay of the battalion.

"I think we can get the most out of this if we present it in the form of a problem. So I'll give you a series of requirements and you will solve them as squad leaders, platoon leaders, and company commander. After each solution we'll have a discussion.

"Here is a large map of the area we will use." Captain Wise pointed to the map on the wall. (See Figure 1.) "Make notes as I give you the situation.

"The enemy is moving to positions around Pigeon Hill and Green Springs. Reconnaissance has shown that he has a series of delaying groups reinforced with antitank weapons operating along the route from Gettysburg to New Oxford to screen his movements. New Oxford is lightly occupied.

"Our battalion is now in the regimental bivouac area around Gettysburg and has been given the mission as advance guard for the regiment.

"We are to move by foot from present bivouac area to an assembly area in the vicinity of New Oxford and prepare to attack the enemy.

"Route of march, east along Gettysburg — New Oxford Highway. Initial point, march objectives, and phase lines are as shown on map. We cross the initial point at 0700.

"Company B is assigned as support of the advance guard. We have attached to us one platoon of the Regimental Tank Company, a section of machine guns, and a section of 75-mm rifles from Dog Company. A forward observer from the 81-mm mortar platoon, which is in direct support, will be with us. We'll also have an engineer reconnaissance detail, a heavy mortar forward observer, a squad from the Pioneer and Ammunition Platoon and, of course, our own artillery forward observer.

"The Regimental Intelligence and Reconnaissance Platoon will be from 3 to 5 miles to our front.

"Now, for your first requirement: As Company Commander of the support, how will you form your company to accomplish the mission?"

A platoon sergeant raised his hand. "I remember that one, sir. The company will be formed into three groups: The point, the advance party, and the support proper." (See Figure 2.)

"That's right, sergeant. The support commander will send forward an advance party, usually of rifle platoon strength. The advance party commander then sends forward one squad as the point. The terrain, visibility, and situation will cause the distance between these elements to vary.

"The distances should be great enough to allow the succeeding elements to deploy without serious interference from the enemy once contact is made. However, the distance should not be too great to prevent each element from rapidly assisting the element to its front. (A general guide is offered in Figure 3.)

(The captain continued to present requirements and draw solutions from his class. We summarize them for the sake of brevity. Follow the requirements and solve each one yourself before you read the captain's solution.)

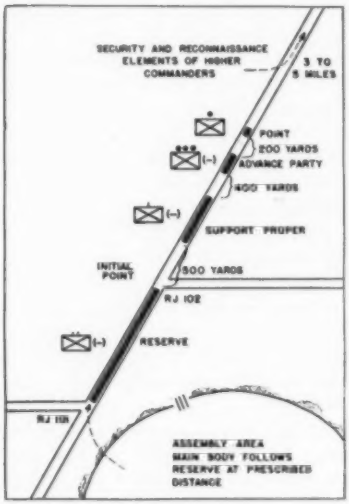


Figure 2. Formation of rifle company as support of an advance guard.

Second requirement: What reinforcements, if any, will you give the advance party?

Solution to second requirement: A 57-mm rifle squad and a 60-mm mortar squad will be attached to the advance party. The tank platoon will be with the advance party, as will forward observers from the artillery, 81-mm mortar platoon, and heavy mortar company, an engineer detail, and a squad from the Pioneer and Ammunition Platoon.

Discussion of solution: The rifle platoon given the advance party mission should be reinforced so it can insure the uninterrupted forward movement of the support. By attaching one 60-mm mortar squad and one 57-mm rifle squad to the advance party, you provide this element commander with a direct as well as an indirect fire weapon to assist in accomplishing his mission. The tanks will be well forward to provide the shock action and firepower. Many times the tanks will lead. However, in this situation reconnaissance has shown that the enemy is definitely reinforced with antitank weapons. There will be times that 75-mm rifles and machine guns will be attached — that is, if the enemy situation warrants. Forward observers from the artillery, 81-mm mortar platoon, and the heavy mortar company will accompany the advance party. The engineer reconnaissance detail and the squad from the Pioneer and Ammunition Platoon will also march with the advance party. This is necessary to assist in the removal of any obstacles that will stop the column.

Third requirement: a. As squad leader of the point, what formation will you prescribe?

b. As advance party commander what formation will you have that element adopt?

c. What formation will the support proper adopt?

Solution to third requirement: a. The point will march in two single-file columns or in a diamond formation.

b. The advance party will march in two single-file columns.

c. The support proper usually marches in two single-file columns.

Discussion of solution: a. The *point*, consisting of one rifle squad not reinforced, will adopt a formation of two single-file columns, one on each side of the road, or a diamond formation. Either of these formations will provide adequate control by the squad leader. These formations also reduce the danger from enemy small arms fire and permit prompt action toward the front or flanks.

A minimum of 10 paces should be maintained between men. Leading riflemen, either two or three, increase this distance to about 20 paces. The squad leader will move where his presence is needed but usually will be just in rear of the leading riflemen. The assistant squad leader marches at the rear of the point (see Figure 4).

b. The *advance party* consists of one reinforced platoon minus the squad sent forward as the point. This element moves in a column of squads with each squad in two single-file columns, one on each side of the road. There should be about 5 paces between men. The advance party commander marches at the head of the party. This places him between the point and the advance party. He prescribes the distance that the point will precede the advance party. It is his responsibility to keep the elements on the assigned route or direction. He is usually responsible for the rate of march of the entire advance guard. The weapons squad is usually between the remaining rifle squads (see Figure 5).

ELEMENT	STRENGTH	AVERAGE ROAD SPACE IN YARDS	AVERAGE DISTANCE TO NEXT SUCCEEDING ELEMENT IN YARDS, DAYLIGHT
POINT	SQUAD	50	200
ADVANCE PARTY	PLATOON (LESS ONE SQUAD)	75	400
SUPPORT PROPER	RIFLE COMPANY (LESS ONE PLATOON)	150	500

Figure 3. Guide to road spaces occupied by elements of the support and distances between elements.

c. The *support proper* consists of the reinforced rifle company less the platoon sent forward as the advance party. This element moves in a column of twos, one column on each side of the route. The distance, however, between men is usually two paces. The company commander will be where he can best control his unit, at the head of the support. However he goes where his presence is needed. He keeps the advance guard commander informed of any changes in the situation.

Contact between these elements is maintained by radio and the use of connecting files. These connecting files are furnished by the larger units to keep contact with the smaller. For instance, connecting files are sent from the advance party to keep contact with the

point. Likewise, the support proper sends out files to the advance party. (See Figures 4 and 5.)

The number of files sent out depends on the interval between the elements, the visibility, and the terrain. The connecting files should

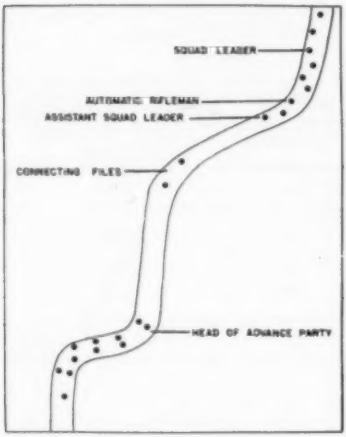


Figure 4. The point precedes the advance party.

be at least two-man strength, so as to avoid the difficulty of looking alternately to the front and rear. One man can watch the front element for signals and the other can watch the following element. They should march within speaking distance of each other. They are responsible for passing on all signals, messages, and orders. They halt only on order or when the front elements halt.

Fourth requirement: What flank security will be provided by the support company?

Solution to fourth requirement: Motorized flank guards provided by the support proper.

Discussion of solution: Motorized flank guards provide protection up to 500 yards when possible. They go to the points that allow observation of the column or to locations that might offer concealment for hostile reconnaissance or harassing detachments. If the terrain is such that vehicles cannot move across country, the flank guards leave the vehicles on the roads and go to selected observation points on foot. Once the column (support proper) passes, the guards then move rapidly by vehicle to the head of the column and select new points. Contact is maintained between the guards and the support proper commander. The commander of each element is always responsible for the close-in security of his command.

Situation continued: The advance guard moved out of the bivouac area and the point crossed the IP at 0700 hours. They are now moving along the route in their prescribed formation. As the leading riflemen are passing RJ 529B (see Figure 1) they suddenly signal *enemy in sight.*

Fifth requirement: Your actions and orders as squad leader of the point:

Solution to fifth requirement: See that the signal is passed back and move rapidly forward to check with leading riflemen.

Discussion of solution: All enemy observed are reported by signaling *enemy in sight* (see Figure 6). This signal is passed back to the advance party. The squad leader immediately moves to the front where he can observe and is needed if contact is made. The point continues

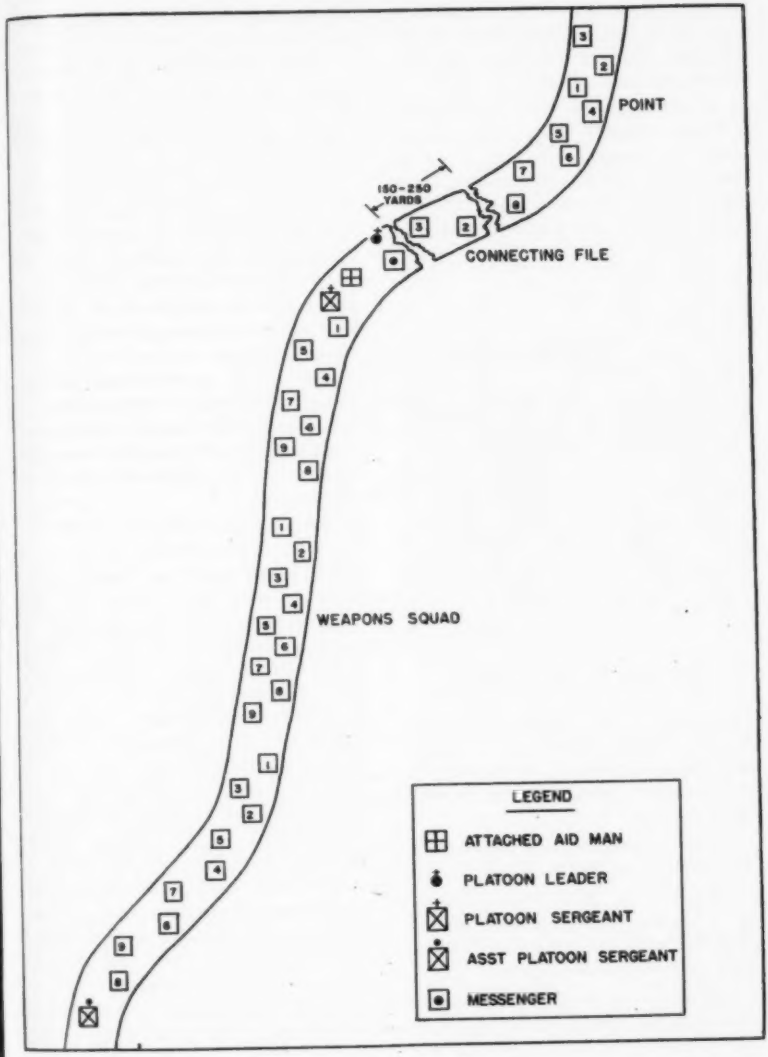


Figure 5. The advance party consists of one reinforced platoon minus the squad sent forward as the point.

to advance and halts only if ordered by the advance party commander. The point fires only on enemy within range.

Situation continued: The leading riflemen report that three enemy riflemen were observed crossing the road near RJ 599L. They had disappeared to the right of the road. The point continues its advance and as the squad leader and leading riflemen emerge from the wooded area 524513 they observe a small enemy group digging on Hill 622 (see Figure 1).

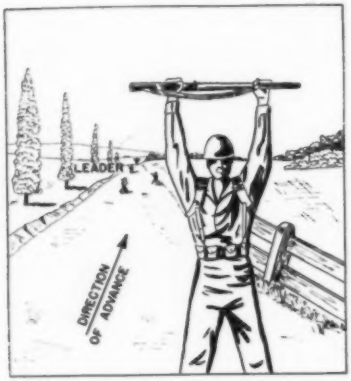


Figure 6. "Enemy in sight."

Sixth requirement: Your actions and orders as point squad leader.

Solution to sixth requirement: Have leading riflemen take enemy under fire immediately and attack with remainder of the point.

Discussion of solution: The point immediately opens fire on all hostile elements within range. By use of aggressive, rapid fire and maneuver the point may very well drive off small enemy groups. At times this may even force a larger enemy element to commit itself and disclose its location.

When enemy strength prevents a quick success, the squad leader builds up fire superiority and moves his squad forward, using fire and maneuver. If cover and concealment are provided by the terrain, he may move his squad around to flank the enemy. Regardless of the method used, he must be aggressive in attacking.

Seventh requirement: Actions and orders as platoon leader of the advance party.

Solution to seventh requirement: Order the platoon sergeant to take command of the advance party and continue the march. Move forward rapidly to investigate the action of the point.

Discussion of solution: When initial contact is made the advance party leader moves rapidly forward to investigate the action. He thus puts himself in a position to make decisions on further actions. The advance party continues to move forward in case it is needed to clear the resistance. It makes every effort to clear the way for the remainder of the column. If an attack is to be made by the advance party, the leader decides the best means of attack; to accomplish this, he must be forward.

Situation continued: The point succeeded in killing two of the enemy and the remainder withdrew quickly to the east by vehicle. The squad leader reassembled his squad on the road and continued in the approach march. As RJ 568B was reached, orders came forward to halt the column for a break.

Eighth requirement: Actions and orders of all leaders.

Solution to eighth requirement: Post observers to flanks and front for security.

Discussion of solution: The commander of each element is responsible for close-in security. During halts the leader promptly posts observers to the front and flanks. This allows the detection of any enemy groups that may try to surprise the column. These observers are posted where maximum observation is obtained and warn their respective elements of approaching danger in time for appropriate action to be taken.

Situation continued: The march is resumed after the break. All elements are still in their prescribed formations. As the point reaches the base of Granite Hill, it receives machine gun fire from the church at RJ 624E.

Ninth requirement: Actions and orders as squad leader of the point.

Solution to ninth requirement: Immediately take the weapon under fire and attack with the squad.

Discussion of solution: After receiving fire the point immediately uses fire and maneuver to attack any enemy resistance. Once more the mission of keeping the route open is uppermost in mind. The leader unhesitatingly decides how he will attack to overcome the resistance.

Situation continued: The advance party leader moves up rapidly to investigate the action and finds that the point cannot move forward to overcome the resistance. The enemy weapon is well concealed and partially covered. Enemy rifle fire is coming from Granite Hill.

Tenth requirement: Actions and orders of the advance party commander.

Solution to tenth requirement: Makes a hasty reconnaissance and estimate of the situation. Decides method of attack and orders his element to attack Granite Hill.

Discussion of solution: The advance party commander moves forward rapidly and contacts the point leader. Finding the point cannot overcome the resistance he immediately commits his advance party. He may use the point to attack frontally and maneuver the remaining squads or he may use his entire platoon to attack frontally. His method of attack depends on the terrain and enemy situation.

Situation continued: The advance party reinforced with the tank platoon had very little trouble in overrunning the resistance on Granite Hill. The point suffered four casualties from the initial contact.

Eleventh requirement: Orders and action of the advance party commander.

Solution to eleventh requirement: The advance party commander orders his element to resume the march promptly. He replaces the point with another squad.

Discussion of solution: As the elements of the support proper and main body are still advancing on the route it is imperative that the point and advance party resume the march promptly in order to keep the route clear for the remainder of the column. The point must be replaced by a new squad as the old one has had four casualties. If the advance party is depleted to a point where accomplishment of the mission is endangered, the support commander may replace it with a new platoon.

Twelfth requirement: As support commander, would you leave the

support proper and move forward during this action?

Solution to twelfth requirement: Yes.

Discussion of solution: You, as support commander are notified of the initial contact either by radio or signals from connecting files. Upon hearing the firing you immediately move forward to investigate. Your presence, to make on-the-spot decisions, is one means you have of influencing the action. You are also responsible for keeping the route open for the main body of the column. There are attached to you and in support of you many supporting weapons with which you may assist the advance party and point in accomplishing their mission.

Situation continued: The column has again resumed the march. The time is now 1245. The point is approaching the bridge at 612533. It has just reported by radio that the bridge is blown and a series of antitank mines has been hastily placed across the road. At the same time enemy mortar fire begins falling on the advance party.

Thirteenth requirement: Actions and orders of advance party commander.

Solution to thirteenth requirement: Go forward with the engineer reconnaissance detail and Pioneer and Ammunition Squad. Have your second-in-command disperse the advance party and keep moving it forward.

Discussion to solution: The engineer reconnaissance detail moves forward to reconnoiter and determine the work to be accomplished on the bridge. If bridge equipment is needed, it is sent for immediately to avoid delaying the column any longer than necessary. The Pioneer and Ammunition Squad has the equipment to clear the mines across the road. They do it as quickly as possible. The advance party does not stop, because of the enemy mortar fire, but disperses and moves through the area as quickly as possible. It reforms after it is beyond the area. If, in the meantime the location of the mortars is reported by flank guards, the artillery or mortar forward observers call for counter-fire on them.

Situation continued: The Pioneer and Ammunition Squad cleared the hasty minefield and the engineer reconnaissance detail determined that the stream was fordable by tanks. The mortar fire ceased and the advance party reformed and moved forward. The support commander has joined the support proper and he hears firing to the front. He moves forward and finds the advance party and point are across the bridge at Diehl's Mill 640531. The entire platoon has been committed with the tanks but cannot advance into the town. The enemy seems to be making a determined stand.

Fourteenth requirement: Actions and orders as support commander.

Solution to fourteenth requirement: Attacks immediately with the support to overcome the resistance.

Discussion of solution: Unless otherwise ordered the support company attacks without hesitation to drive off the enemy or envelop his position. The support commander moves forward rapidly to make an estimate of the situation. When the resistance cannot be overcome by his lead elements, he decides on the best method of attack and im-

mediately employs his support. He tries to envelop the enemy quickly rather than attack frontally. If the support is unable to reduce the enemy resistance, it immobilizes him by fire and locates his flanks.

The support as a unit has the mission of preventing the unnecessary delay of the battalion as well as protecting it against a surprise attack. *To do this requires aggressive action.*

Lt Gen Werner von Blomberg, German Army, accompanied by Col Kulenthal, German Army, arrived last night for a short visit to Fort Benning. — ***Infantry School Diary*, 10 October 1930**

PRINCIPLES OF ANTI-GUERILLA WARFARE

By LT COL ARTHUR P. MURPHY, Infantry

Guerilla warfare has received more publicity and attention since the start of the war in Korea than ever before in military history. Once neglected by commanders and military scientists, it has now reached the point where its importance is in danger of becoming overemphasized. As guerilla warfare will undoubtedly play a considerable role in future wars, it is important that military men know what it is, what its strengths and weaknesses are, and the principles of combating it.

Let's first nail down just what we mean when we use the words, "guerilla" and "guerilla warfare." Most of us think of the guerilla as a poorly-armed civilian who carries on resistance behind enemy lines. He may ambush enemy convoys, raid enemy installations, blow up railroads, bridges, assassinate enemy collaborators, send out information regarding the enemy on his radio, and carry on a variety of other underground activities. He may also form semi-military organizations and engage in regular offensive and defensive combat. Instead of being called a guerilla, he may also be called a "partisan."

One thing is wrong with this description. Most of the so-called guerillas that our forces in Korea have tangled with were not civilians, but enemy soldiers who infiltrated through our lines and attacked our rear installations and convoys. So let's try another definition. *A guerilla is a person who utilizes the tactics peculiar to guerilla warfare.* He may be a civilian, in which case he is also a partisan, or he may be a soldier, who is either a member of an infiltration party or unit or has been cut off behind our lines during our advance.

What is guerilla warfare? We have a choice of two explanations.

1. We may define guerilla warfare as the sum of all military, political, and economic operations carried on by irregular forces behind enemy lines. This includes hit-and-run attacks, regular offensive and defensive operations, espionage, sabotage, propaganda, and passive resistance. Defense against many of these activities is a subject in itself. Counter-espionage, for instance, deals with the problem of espionage, psychological warfare with the problem of propaganda, while normal military tactics concern regular offensive and defensive operations, even if carried on by partisans.

2. On the other hand, we may limit guerilla warfare to that peculiar type of combat carried on by small groups behind enemy lines. It makes maximum use of surprise, it seeks to inflict casualties and damage rather than to seize and defend ground, and it makes every effort to avoid casualties.

This type of warfare presents a peculiar problem. If either partisans or enemy infiltration units seek to seize and hold terrain in our rear, we can bring up forces to attack and destroy them. They then cease to be a problem. But, if they strike without warning, inflict all of the casualties and damage possible, and flee to the protection of the mountains or forests as soon as the situation becomes unfavorable, they present a far more difficult problem. This is the kind of activity that best describes the term *guerilla warfare*, especially as will be used in this article.

We have, then, two types of guerillas: partisans and enemy infiltration units. Both of these may engage in guerilla warfare and in other activity. From a purely military point of view, these two types of guerillas present similar problems. *The military problem of defending a convoy against ambush or an installation against a raid by either type of guerillas is the same.* However, in another sense, these two types of guerillas present quite different problems. Against partisans it is possible to make effective use of non-military measures, while infiltration must be dealt with as a strictly military problem.

Legal Status of Guerilla Warfare

The Rules of Land Warfare do not prohibit regular soldiers from engaging in guerilla warfare, except when they disguise themselves as civilians or otherwise fail to observe these rules. The principal question of international law revolves around the status of partisans — that is, civilians who take up arms. The Rules of Land Warfare state that civilians opposing an invader are entitled to belligerent status if they meet these requirements.

1. If they have risen to oppose an invader and have not been organized *after* the country has been occupied.

2. If they are commanded by a person responsible to an established government.

3. If they bear arms openly and wear an insignia recognizable at a distance.

4. If they observe the Rules of Land Warfare.

Partisans seldom meet all of these requirements and, technically, are not usually entitled to belligerent status. They can be tried and executed if captured. As a practical matter, however, it is usually advisable to grant prisoner-of-war status to captured partisans. For one reason, it gives them an incentive to surrender, and for another reason, if we wish partisans to give prisoner-of-war status to those of our men whom they capture, we must grant this privilege to them.

Characteristics of Partisans

It may seem extraordinary that partisans are able to operate successfully against regular forces where a regular force would suffer defeat. Let's examine some of the secrets of partisan success.

1. *Existence in Rear Areas:* In time of war, military units are organized and disposed primarily to deal with attacks by an external enemy. As a result, troops in the front lines are ready to deal with any kind of attack; but back in the rear areas are many installations and lines of communication that, being less protected, are vulnerable to guerilla attack. It is like the human body: germs can cause little

trouble on the surface of our skin, but they can cause all kinds of trouble if they get inside our bodies. Also, it is much more difficult to defend an area than it is a line. Imagine a circular area 100 miles in diameter. If we are defending the circumference of this circle, we must cover about 314 miles. If we must defend every square mile of this area, we must defend about 7,853 square miles! And if we must defend *both* the circumference and the interior, the task is tremendous.

2. *Knowledge of Terrain; Ability to Disguise as Civilians:* Partisans are natives of the areas in which they operate. This gives them two advantages: they have an intimate knowledge of the terrain, and when they lay aside their guns and equipment, they cannot be distinguished from the rest of the population.

3. *Favorable Terrain:* Modern armies depend heavily on their weapons and their vehicles. Mountains, swamps, jungles, and dense forests often make it difficult or impossible to use them. Hence, such terrain is favorable to partisan activity. A modern city can present as difficult terrain as a mountain range, so we may find partisans here also. Flat, open areas with good road nets can usually be controlled by regular forces. But even here, if the number of regular troops is not sufficient to control the area, partisans can flourish.

4. *Civilian Support:* All partisan success depends on civilian support. The Chinese Communist leader, Mao, has said that the people are the water that the partisan fish swim in. The fish can flourish only if the temperature of the water is right. The people furnish food to the partisans. They give information, and they act as outposts to warn the partisans of enemy approach. In some cases, partisans can force civilians to furnish support against their will by threats and terror. However, such action can be taken against only a minority of the civilian population. The majority support must be voluntary, and when a partisan movement is flourishing, we can be sure that it has the active, voluntary support of a large proportion of the population. Without such support, partisans cannot exist.

Support for the partisans does not have to be all-inclusive, however; there will usually be groups that are not in sympathy with the partisans. Some, for ideological reasons, will sympathize with the invader. Others will object to the disorder and material damage that partisan warfare will bring to their area. If they aid the partisans, it will often be under threats and pressure.

5. *Intelligence Activity:* Extensive intelligence activity is the key to success in all partisan operations. Every loyal civilian is a partisan intelligence agent, and all that the civilian population learns about the invading army is available to the partisans. Partisans are keenly aware of the importance of preventing their enemies from gaining information about themselves or about the terrain. Agents sent to spy on the partisans die a far from pleasant death if captured. All loyal civilians watch for and report suspicious persons. Civilians, when guiding the enemy, avoid the trails used by the partisans.

6. *Use of Surprise:* By achieving

surprise, partisans overcome many of their enemy's advantages. Partisans gain surprise through:

a. Their extensive intelligence activity.

b. Their intimate knowledge of the terrain.

c. Their great mobility.

Because they are lightly armed and equipped, because they are not tied down to fixed bases of supply, and because they operate in small groups, partisans are capable of moving with remarkable speed over difficult terrain. During World War II, Russian partisan bands were known to have moved as much as 45 miles in one day.

7. *Use of Hit-and-Run Tactics:* Partisans can attack and be far away before pursuit can be organized. If pressed closely, they can disperse and reassemble at an agreed rendezvous after the heat is off.

8. *External Support:* Partisans do not often fight alone against superior forces, as is often imagined. During World War II, fifty per cent of the Red air force was engaged in supplying the Russian partisans; the Allies supplied arms and equipment to the partisans in Western Europe; and General MacArthur supplied the Filipino partisans by submarine. During the post-war trouble in Greece, the Communist partisans received aid from Albania and Bulgaria. Indeed, partisan capabilities cannot be fully realized without external support.

9. *Enemy Pre-Occupation with Main Battlefront; Enemy Failure to Appreciate Partisan Capabilities:* These are two ways in which the enemy himself makes it easier for partisans to operate successfully. The enemy is usually engaged on a regular battlefront and hence is not able to commit his full resources against the partisans. On the other hand, all too often, both commanders and troops fail to estimate correctly the present and potential threat that partisan activity poses to their security and operations. As a result, they fail to take the psychological and physical measures necessary to protect themselves.

Characteristics of Infiltration Units

Small groups of enemy soldiers that may infiltrate our lines will have most of the advantages the partisans have. They can exist in our rear areas, although they generally are less numerous and effective in areas some distance from the front lines. However, if the civilian population is hostile to the enemy, infiltration units are not able to operate effectively in rear areas where civilian life is comparatively normal. Infiltration units may also be expected to utilize favorable terrain, surprise, and hit-and-run tactics. They may also have the advantages of external support, enemy preoccupation with the main battlefront, and enemy failure to correctly appreciate their capabilities.

Infiltration units are not likely to be natives of the area in which they are fighting and so will not have an intimate knowledge of the terrain. Their ability to disguise themselves as civilians depends upon their nationality. The North Koreans had no difficulty in disguising themselves as South Koreans, but one of our soldiers would have considerable difficulty in doing the same. Furthermore, regular enemy

troops may be unwilling to use such disguise for fear of losing the protection of the Rules of Land Warfare. As indicated above, enemy infiltration units may or may not have the support of the local population; this determines the extent of their intelligence activity.

Guerilla Disadvantages

Both partisans and infiltration units have several disadvantages that limit their capabilities. The training of partisan forces is generally inferior to that of regular troops. The lack of instructors, training literature, and the conditions of partisan life make adequate training difficult. This may not be true in the case of infiltration units. In fact, they may have received special training. Partisan forces, even when well supplied from outside, do not have the heavy equipment, tanks, artillery, vehicles, and aircraft possessed by regular forces; and infiltration units also lack many of these weapons. However, recoilless weapons can be effectively used by both. The ability of both partisans and infiltration units to concentrate large forces is limited by the threat of possible enemy action and the difficulty of feeding many men together. As a result they do not have the ability to attack successfully large, well defended enemy forces or installations.

Partisans are civilians and their morale is subject to wide fluctuations. It thrives on success, but can be severely affected by such things as defeats suffered by friendly regular forces, unsuccessful guerilla attacks and considerations affecting the civilian population, which, we must remember, includes friends, families and other relatives. *When their morale is low, partisans are susceptible to propaganda. The influence of leadership on partisan morale is great, and the loss of a leader may often bring about the disintegration of a partisan unit.* Morale considerations will also affect infiltration units, for the morale of a regular soldier is not likely to be very high when he is behind enemy lines, cut off from reinforcement, supply, and medical care.

There remains the greatest disadvantage of all. *Guerilla warfare cannot force a decision against a determined enemy.* How significant would the Russian partisan activity have been if the Red Army had been defeated at Stalingrad? How effective would the French Maquis have been if the Allied Forces had been repulsed from the Normandy beaches? And how effective would the Filipino partisans have been if General MacArthur had not kept his promise to return? Guerilla forces can help regular armies to win wars, but they cannot win wars by themselves unless they give up guerilla tactics and fight like regular armies by seizing and defending ground. When they do this, they lose the advantages inherent in the guerilla type of warfare and may be expected to be unsuccessful against any except a weak or overextended enemy.

Role of Guerilla Warfare in Modern War

By using small numbers of his own troops or by organizing partisans behind our lines, the enemy seeks to interfere with our operations against his main forces and to cause us to divert combat troops for the protection of our rear installations and lines of communication.

Guerilla warfare, then, is essentially a harassment to assist his regular forces.

Our mission is to destroy the enemy's main forces. If we can accomplish that mission, we destroy the principal reason for guerilla existence. Since guerillas can interfere seriously with our regular operations, we must find ways to cancel their effectiveness. We can probably destroy the guerillas if we are willing and able to commit large numbers of combat troops for widespread hunts into the guerilla hideouts. But this takes more troops than we can afford. If we commit our troops against guerillas on a large scale, we are doing just what the enemy wants us to do.

Our operations against guerillas are basically defensive, limited to those necessary to prevent serious interference with our regular operations. We do this because the difference between minor harassment and complete protection usually constitutes a luxury we cannot afford. In determining the scale of our anti-guerilla operations, we consider not only the present but also the potential guerilla threat. A small, weak partisan movement that does not seem to merit serious consideration may grow into a serious threat if not dealt with soon enough. A partisan movement that does not cause much trouble in a rear area may become a fatal stab in the back if the area becomes a battleground.

These considerations give anti-guerilla operations a peculiar character. We generally stay on the defensive, but we must recognize those situations where the best defense is offensive action. *Generally speaking, we do not solve the guerilla problem but merely learn to live with it as successfully as possible.*

We often accept the presence of guerillas in those areas where they do not seriously interfere with our regular operations, limiting our operations to those necessary to protect our vital areas and lines of communication.

Such a situation requires a commander to make efficient use of the forces at his disposal and to adopt non-military measures whenever possible. Forces cannot be utilized successfully unless there is a plan that includes political and administrative as well as military phases and that coordinates the activities of all units. Since we must use as few combat troops as possible for anti-guerilla operations, service troops must learn to double in a combat role in the defense of rear area installations and lines of communications. *Self-defense is the primary rule for all installations, with centrally located mobile alert forces being designated to go to the aid of units that get into more trouble than they can handle by themselves.* Sometimes these mobile alert forces are combat troops, but often they are service troops who have temporarily left their regular tasks. We may reinforce our own troop strength by forming constabulary units from friendly elements of the local population to fight against partisans. However, such units have to be well equipped, trained and disciplined, or they are more of a liability than an asset.

The plan must form an integral part of the over-all plan for defense of our rear areas against other forms of attacks, such as airborne attacks and seaborne landings on

an exposed coast. The plan must also provide for continuity of command and policy to the greatest extent possible. Troops and commanders in an area gradually learn to control the guerilla situation, but if they are frequently shifted about, the guerillas will profit by the inexperience of new arrivals. This is aggravated if there are constant shifts of policy regarding methods of dealing with the guerillas.

The plan must also provide for the continuous collection of information and circulation of intelligence on the guerillas, the civilian population, and the terrain.

Non-Military Measures Against Partisans

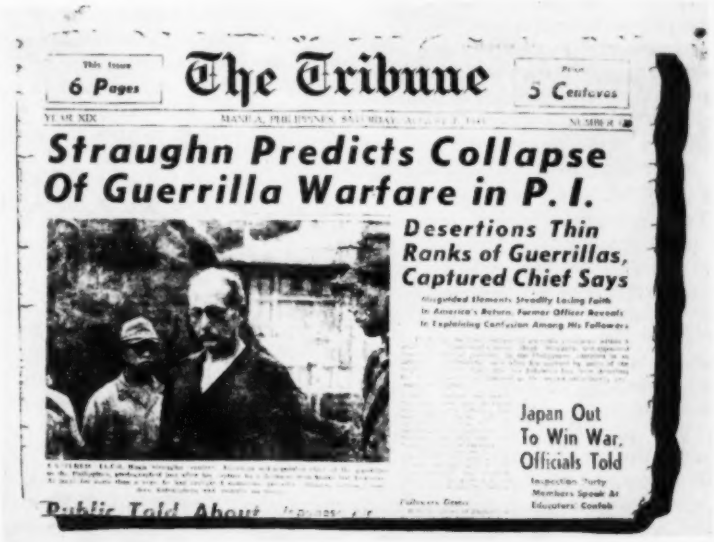
When enemy soldiers infiltrate our lines and carry on guerilla warfare, we are limited to military measures in combating them. In the case of partisans we can use a number of non-military measures effectively. The most important of these is action against the civilian population to cause them to cease supporting the partisans. The measures that we may take cover a wide range. They begin with propaganda and persuasion.

Civilian support for a partisan movement is seldom complete. Some elements of the population are not sympathetic to the movement and their support, if any, is given under pressure and threats. This group may include persons of considerable influence in the community. Our aim is to get such persons to use their influence against the partisans. Although some of these people may be ideologically sympathetic to us, most of them are motivated by one of two considerations: they may possess wealth and property that they fear is subject to loss and destruction by partisan activity; or they may feel that partisan activity will bring additional hardship and suffering to the people of the area. In either case, our appeal should be simple and straightforward. We point out that the war will be decided by the conflict between our own and the enemy's regular forces and that the only effect of partisan activity will be to force us into counter-measures that will increase the hardship, suffering, and material damage in the area.

In dealing with such people, we are careful not to compromise them, for once they are labeled as puppets, much of their value is gone. We do not use them as sources of intelligence, and we deal with them as a group rather than as individuals. We must realize that if these leaders use their influence on our behalf, they and their families are in constant danger of retaliation from the partisans. We are therefore ready to give them adequate protection. We may find that some of these people are playing safe and also giving assistance to the partisans. If this occurs, the offender is warned in the presence of his fellows that, although we appreciate his situation, we cannot tolerate such activity. If these warnings do not work, one of the worst offenders is severely punished as a warning to the others.

In addition to influencing the people through their own leaders, propaganda is addressed to the people generally to publicize our war aims and to emphasize the inevitability of our final victory. The Japanese followed this practice in the Philippines. (See Figure

1.) The people are assisted in organizing to deal with the hardship, discomfort, and damage caused by the war. Every effort is made to avoid idleness among them. Communities or segments of the population that are threatened by partisan reprisals are given means of calling for help and encouraged and assisted in banding together for mutual defense.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The Tribune

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Straughn Predicts Collapse Of Guerrilla Warfare in P. I.

Desertions Thin Ranks of Guerrillas, Captured Chief Says

Misguided Elements Steadily Losing Faith In America's Return, Former Officer Reveals In Explaining Confusion Among His Followers

Japan Out To Win War, Officials Told

Inspection Party Members Speak At Educators' Confab

Public Told About

Figure 1. Propaganda aimed at the civilian population supporting guerillas stresses the futility of resistance and the inevitability of defeat. (The Tribune *was Japanese controlled during the war.)*

In all of our dealings with the people, our attitude is firm and leaves no doubt that we are ready and able to compel compliance with our directives against aiding the partisans. Where a partisan movement is flourishing, a good part of the people, men, women and even the children, are as much our enemies as the partisans themselves, and a soft-hearted or naive attitude on our part enables them to make fools out of us. When the people continue to aid the partisans, we use force to stop them.

At this point we find ourselves somewhat embarrassed by our criticism of such measures used by our enemies during World War II. The Rules of Land Warfare seek to protect civilians of an occupied area as much as possible from the damage and destruction of war, but at the same time these rules provide that this protection is contingent upon the civilians taking no part in hostilities. If the civilians of an occupied area insist on taking part in the hostilities by aiding a

partisan movement, the occupier is authorized to enforce compliance with his directives. The question of whether force should be used against a civilian population that is aiding a partisan movement boils down to a matter of national policy and the effectiveness of such action. Leaving the question of national policy to the statesmen, there is no question that such measures, properly used, can seriously affect a partisan movement. However, if force is used improperly and indiscriminately, it can increase civilian support for the partisans. *Force must be used in such a manner that it is clear that it is not arbitrary oppression but a punitive or preventive measure justified by the existing situation.*

Four principles govern the use of force against a civilian population: First, it is used only against those individuals or segments of the population that are actually guilty of aiding the partisans. Second, its use is consistent and has the appearance of a judicial process. Third, we use whatever amount of force is necessary. Fourth, the threat contained in the willingness and ability to use force is more effective than the use of force itself.

Here are some of the types of forceful measures that we can use. We can establish registration systems, curfews, and restrictions on travel in areas where partisans are active. The name of each inhabitant of every house is registered, and a copy of the registration is posted on the door. All persons are required to be in their houses by a certain hour. Whenever partisan activity occurs, a check is made of all houses, and anybody missing must be accounted for. Any person apprehended without a registration card is investigated as a possible partisan.

We can require the people to evacuate sparsely populated areas where partisans are active. Thereafter, anyone found in these areas is assumed to be a partisan. This action makes it difficult for partisans to establish a security system based on the friendly population.

We can take hostages. They can be used to insure that certain communities do not give aid to the partisans. They can be held in our installations or placed in our convoys and patrols to keep the partisans from attacking them. Relatives of known partisans may be held to secure the surrender of the partisans.

Individual civilians found guilty of aiding the partisans may be punished by imprisonment, confiscation of property, or death. In many parts of the world, loss of property is more greatly feared than death itself, since property involves the ability of the man's family to survive after his death.

Lastly, it may be necessary to punish entire communities that are aiding the partisans.

Use of Psychological Warfare Measures

Propaganda and other psychological warfare measures may be used with considerable effect against the partisans themselves *provided* these measures are used in conjunction with successful operations by our own forces—either against the partisans or against the regular forces of the enemy. Propaganda does not contain threats that we are not able to back up. Several

propaganda themes can be used. The most effective one plays up defeats of the enemy's regular forces. Another effective theme is that partisan activity has no real effect on the outcome of the war (see Figure 2) and that all the partisans are doing is bringing needless hardship and suffering to their friends and relatives. Also effective is the theme that the enemy is sacrificing the partisans to gain

GUERILLAS
Guerrilla Resistance Against The Mighty Imperial Nippon
Forces Is Just As Futile And Foolish As—
"Barking At The Moon."

Figure 2. Another effective propaganda theme is that partisan and guerilla activity is having no real effect on the outcome of the war. (This leaflet was dropped on guerilla areas in the Philippines by Japanese airplanes.)

unimportant military ends (see Figure 3).

Another effective propaganda device is to persuade families of partisans to write letters to their men, asking them to cease resistance and

Figure 3. A third propaganda theme is that the enemy is sacrificing partisans in a hopeless situation to gain their own ends. (Another of the leaflets dropped by the Japanese on Philippine guerillas.)

return to their homes. As mentioned above, families may be held as hostages to lure surrenders.

Constabulary Forces

When a considerable segment of the population supports our cause, these people may be organized into constabulary forces to help us fight partisans. Such forces must be well trained, disciplined, and equipped. If they are poorly trained and armed, if they are penetrated by partisan agents, if they are under the influence of partisan propaganda and threats, or if they are simply a bunch of cut-throats anxious to terrorize and loot the people, such forces will be a liability instead of an asset. If the quality or ability of such forces is questionable, they should be used in conjunction with regular troops. Using constabulary forces in other than their home areas is often advisable because their families are not subject to partisan reprisals.

Another effective way to fight partisans is to strike at their leadership. If we can eliminate the important leaders, a movement may collapse. They can sometimes be captured when they come to visit their families or sweethearts. If we are not granting belligerent status to the partisans, we can offer rewards for the death or capture of these leaders, or we can send out agents with the specific mission of assassinating them.

In some cases we can disrupt partisan organization by promoting conflicts between rival partisan units. We can also covertly organize fake partisan units that engage in conflict and rivalry with the real partisans, thus bringing the entire movement into disrepute.

Interference with communication greatly handicaps partisan activities, because without communication, effective command cannot be exercised over the dispersed partisan sub-units. Partisan units of any size may be expected to have well developed communication routes over which messages and instructions are sent by regular couriers. Intercepting these couriers and blocking these routes reduces partisan effectiveness. Women and even children will often be used as partisan couriers. Partisans may also have radios to communicate with their own sub-units and regular forces. These radios can be jammed, and our own operators can interfere with the traffic by cutting into the nets. Direction - finder equipment can be used to locate the radios, and this information can be used to direct efforts to capture the radios. Even if we cannot capture a partisan radio, if we force the partisans to move and hide the radio constantly, the set soon becomes useless because of the rough treatment it receives.

We may also strike at partisans through their sources of supply. Food supply is particularly vulnerable. If we force civilians to move out of the remote areas, this source of supply will be cut off to the partisans. In more densely populated areas, the crops can be seized and then rationed out in amounts sufficient to feed only the bona-fide civilians. Every effort is made to prevent the enemy regular forces from delivering supplies to the partisans over land routes or by submarine or air-drop. Anti-submarine mines can be placed at likely rendezvous points along the coast, and our planes can seek to disrupt air

supply. Firearms and military equipment in the possession of civilians are collected. We also make sure that the partisans do not replenish their supplies at our expense. Our own arms, ammunition, and explosives should be particularly well guarded, and supply discipline should be stringently enforced among our troops.

Defense Against Guerilla Attack

The military problems of defense against partisans and infiltration units are almost identical. The only difference is that we may not expect infiltration units to have the support of the civilian population to the same degree as partisans. In fact, the civilian population may be friendly to our forces, and we may be able to make use of friendly civilians to increase our security against infiltration units.

Since our defensive operations have the limited mission of preventing interference with our regular operations and must emphasize economy of force, defensive measures fall into three phases:

1. Defensive measures by individual units, installations, and convoys.

2. Designation of centrally located mobile alert forces.

3. Establishment of a patrol and outpost screen around vital areas.

Local Defense of Units and Installations

The local defense of a unit or installation should include the following:

1. *Psychological preparation:* Much guerilla success is based on surprise gained because both troops and commanders are not alert to the possibility of guerilla attack. When an attack comes, confusion and terror result. On the other hand, little surprise can be gained if troops are psychologically prepared always to be alive to the possibility of attack.

2. *Choice of position:* Installations are located in positions that are favorable to all-around defense. Small units and installations establish common perimeters with other units in the area.

3. *Counter-intelligence:* If guerillas cannot gain information on an installation, they cannot make effective plans to attack it. Therefore every effort is made to prevent them gaining such information. Civilian supporters are one of the principal sources of guerilla information. Therefore, except where their loyalty is beyond question, civilians should be excluded from installations. In some cases this will not be possible, and we may need to employ civilians. If so, we are careful to see that they learn as little as possible about our guard and security arrangements. Counter-intelligence also includes the use of camouflage and the periodic change of guard and security arrangements.

4. *Plans and training:* Every installation plans action to be taken in a guerilla attack, and every soldier concerned knows and understands what he is to do. Guerilla attack often comes at night and without warning, and there is little opportunity to tell men what to do after the attack has started. Men sleep in areas from which they can protect important equipment and supplies. Otherwise, guerillas may assign a force to contain our men while another force destroys or

carries away the equipment and supplies.

5. *Warning system:* A warning system is provided to alert the men of a unit. Underbrush that offers a concealed approach to the installation is cleared. Trip flares or other warning devices are placed along likely approaches. Watchdogs may be used. Guard personnel are well trained and briefed not to be duped by deceptive measures or diversions. Means are provided for alerting all personnel, and reliable communication is established to call for aid, realizing that the guerilla plan of attack may include an effort to interrupt such communication by cutting telephone wires or destroying radios.

6. *Passive defense measures:* The greatest use is made of passive defense measures, including foxholes, wire, mines, and booby traps. But mines and booby traps carelessly placed and not recorded cause more casualties than guerillas. Precautions and regulations are observed in their use.

Mobile Alert Forces

Centrally located mobile alert forces are designated to rush to the aid of units in their area that are being attacked by guerillas. These forces may include infantry, armor, and light aircraft, or they may consist only of service troops. These forces will also attack guerilla units in the vicinity of our vital areas or lines of communication. Since we can expect the guerillas, upon learning of the approach of our force, to seek to escape, our plan of attack includes an effort to block routes of escape. The mission of these mobile alert forces is basically defensive and will normally be restricted to a certain area. The force is not normally expected to pursue the guerillas back to their hideouts in the mountains or dense forests, because if it became so involved it would not be available in case another unit were attacked by guerillas during its absence.

Patrol and Outpost Screen

The defensive measures we have described still leave the initiative in the hands of the guerillas. They are still free to attack our installations at will. To gain greater protection, we establish a patrol and outpost screen around our vital areas that the guerillas must penetrate before they can reach our installations. Where possible, the screen is established around an area containing several installations rather than around each installation. Such a screen is of little value if civilian supporters of the guerillas or guerillas in disguise can pass through it at will. So, if the population is hostile, we establish a no-man's land on the outer fringes of this screen, and we seek to kill or capture every person sighted in this area. On the other hand, if the local population is friendly to our forces, we may tie it into our outpost system to give warning of the approach of guerillas.

In setting up this screen, outposts are often more effective than patrols. Guerillas seeking to infiltrate into the area try to elude our patrols and are successful most of the time. On the other hand, a number of small outposts, located in concealed positions along the principal approaches, can ambush and inflict serious damage upon much stronger guerilla bands that may walk into these traps.

Our forces in Korea had considerable trouble with North Koreans infiltrating our front line disguised as refugees. This device can be countered by prohibiting the

entry of refugees except at points where they can be screened.

Protection of Convoys

Because of their more exposed position and their inability to make detailed inspection of the terrain, convoys present a more difficult defense problem than installations. Here again, defensive measures consist of the three steps: local protection of individual units, use of mobile alert forces, and establishment of a patrol and outpost screen.

Where we have a choice of routes, we select one that offers the least possibility of ambush. Convoys are not run on regular schedules. Before setting out, all personnel are warned of the possibility of ambush and instructed in the action to be taken in such an event. Since men crowded into a vehicle are at a disadvantage when ambushed, every effort is made to make it easy for them to dismount quickly. Vehicles are not overcrowded. Tail gates of trucks are left down, and, if weather permits, tarpaulins and bows are removed. Packs and other equipment are placed so that they do not interfere with the men getting out. All vehicles have assistant drivers to take over in case the driver becomes a casualty.

The convoy is formed into an advance guard, a main body, and, if sufficient troops and vehicles are available, a rear guard (see Figure 4). If a tank or armored vehicle is available, it should lead the column. Other armored vehicles are distributed singly throughout elements of the column. The distance between elements of the convoy is great enough so that not more than one element can be caught in the same ambush. The distance is small enough to keep all elements within supporting distance of one another. Last, each element should be strong enough to hold out until help arrives. There is radio communication between the elements of the convoy.

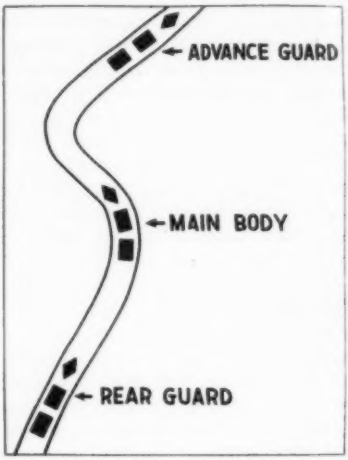


Figure 4. The convoy is formed into an advance guard, main body, and rear guard.

The convoy moves through likely ambush areas at slow speed. Upon approaching a likely ambush position, the leading vehicle fires a short burst at it. If guerillas are waiting in ambush, this may cause them to open fire prematurely. If any element of the convoy is ambushed, all vehicles in that element come to an immediate halt, and all personnel get out quickly, take up firing positions, and return the fire. Armored vehicles also open fire. The commander of the nearest element of the convoy that is not caught in the ambush, upon

learning of the ambush, makes a hasty reconnaissance and estimate of the situation and commits his men in an attack against the flank or rear of the ambush position (see Figure 5). This threat to their route of escape will usually cause the guerillas to withdraw. After the guerillas have been driven off, the convoy reorganizes and continues on its way.

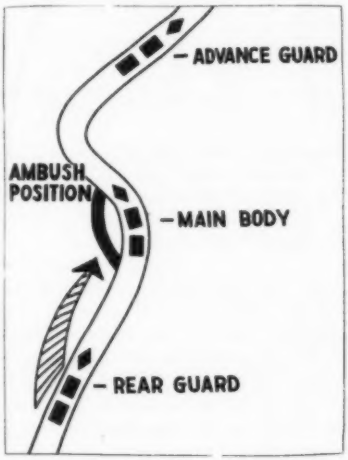


Figure 5. The nearest element of a convoy that is not caught in the ambush attacks the rear or flank of the ambush position.

Where the guerilla threat is severe, additional measures may be taken. All likely ambush positions along the route may be cleared of underbrush, and the route may then be patrolled daily by aircraft to check if any artificial positions are being prepared. Particularly dangerous points may be occupied by outposts, and convoys may be run on a control system. Convoys entering the area are stopped and warned of the danger of ambush, and when they set out, the time of their departure is radioed to outposts along the route. If the convoy fails to arrive at any outpost on schedule, a mobile force is sent to its aid.

If the route is not too long, a patrol and outpost screen may be established to keep guerillas away. When the route is long, the screen is too thin to be effective, and the men can be better used to reinforce convoys proceeding through the area. As a last resort, we may have to require all vehicles to travel through the area on regular schedules under an armed escort that includes infantry, engineers, and armor.

Protection of Foot Columns

As every area has many more foot paths and trails than roads, guerillas have a harder time ambushing a foot column than a convoy — unless they have exact information on the route of march. The first protection, then, for a foot column is to keep secret the route that it plans to follow. We do not send regular patrols over the same trails at the same time every day, and patrols are careful about asking directions from civilians.

Security elements in a foot column have a much better opportunity to examine possible ambush positions than those in a vehicle column, and the safety of the column behind depends in large measure on how well these security elements do their job. They examine all likely ambush positions carefully, halting the column when necessary. Here, too, firing into suspicious positions often causes guerillas to open fire prematurely.

The formation of a foot column conforms to the same principles that were described for vehicle columns. That is, it should be organized so that the entire column is not caught in the same ambush. Two patrols working within supporting distance of each other are more effective than one patrol going out alone. Men caught in an ambush get into firing positions quickly and return the fire, while that portion of the force, which is not in the ambush attacks against the flank and rear of the ambush position. If a whole column is caught in an ambush, the leader disengages part of his men from the action and sends them around to attack the ambushers' flank and rear.

We cannot overemphasize the need for men to react to an ambush with confidence and aggressiveness. If the men become terrified and run away wildly, greater casualties will result. Equipment, supplies, and wounded men fall into the hands of the guerillas, who are encouraged to make more ambushes. If our men meet ambush calmly and aggressively and hold their ground, their casualties are fewer and they kill more guerillas. These defeats lower guerilla morale and discourage them from future attacks.

Offensive Action Against Guerillas

Offensive action against guerillas is at times necessary, but is seldom successful unless we have accurate intelligence on the guerillas and the terrain, and unless we are able to achieve surprise. Unless we know where the guerillas are, unless we know the terrain well, and unless we can get within striking distance of the guerillas before being discovered, we cannot catch them, and we will climb a lot of mountains and comb a lot of forests for nothing.

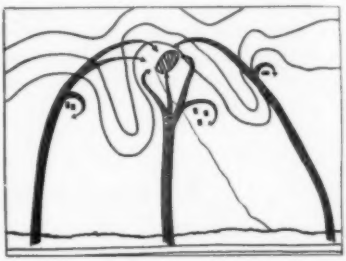


Figure 6. In attacking a guerilla hideout, the movement of all units is timed to bring them to the circumference of the area at the same time.

We are careful to conceal plans for offensive action. Unusual concentration of troops before an operation is avoided. Reconnaissance planes do not pay undue attention to the area. If the guerillas learn an attack is coming, they will try to escape. Therefore we seek to cut off all routes of escape before the attack. This requires a careful estimate of the area and close coordination of the movements of the units making the attack. The security of the guerillas and their civilian supporters is apt to be poor during darkness and inclement weather. Therefore, these are good times to make attacks. Where the civilians appear to be aiding the guerillas, each civilian settlement on the way is approached without warning, surrounded, and all of the inhabitants held temporary prisoner to make sure that they do not warn the guerillas.

The movement of all units is timed to arrive at the circumference of the guerilla area at the same time (see Figure 6). When the guerillas learn that they are surrounded, they may either attempt to fight their way out of the encirclement or they may disperse and seek either to infiltrate our lines or to hide and let our lines pass over them. Our troops carefully search the terrain that they pass over, and we must have reserves available to back up the line. Parachute troops can be used to advantage in this type operation.

When we are not able to make an encirclement of the guerillas, because of the terrain or lack of sufficient troops, the next best thing is to make a surprise raid. The aim in this is to kill and wound as many guerillas as we can. What has been said about the necessity for accurate intelligence and achieving surprise is even more important here, because we must get within firing distance of the guerillas before being discovered. Unless the guerillas are careless about their local security, we either have to surprise or elude their outposts. A small raiding force is best, because a large force is more easily discovered. Upon sighting the guerillas, our troops deploy rapidly and attack aggressively. The guerillas usually return as much fire as possible to get our men to hit the ground; then they try to escape under the cover of a rear guard action. We train our troops not to halt when fired upon but to press forward and pursue the guerillas as far as practicable.

After we capture a guerilla-held area, we search it carefully for wounded or hiding guerillas and for hidden equipment and records. It is also a good idea to leave troops in hidden positions along trails in the area for a few days, as guerillas who have so far escaped will often wander into these traps.

Summary

1. The primary mission of all anti-guerilla operations is to prevent the guerillas from seriously interfering with our operations against the enemy's regular forces. This consideration will determine the amount and type of action that we take against guerillas. Most of the time this will mean that we will deal with the guerilla problem, not by solving it, but by learning to live with it successfully.

2. The best way to fight partisans is by non-military measures against the civilian population upon which the partisan strength depends. Against infiltration units we depend largely upon purely military measures.

3. The best defense against guerilla attack is for every unit, every headquarters, every installation, every soldier and every commander, no matter how far behind the lines, to be constantly alert to the possibility of guerilla attack and always be prepared to meet attack in a confident and aggressive manner.

HAVE THEY MET THE TEST?

By CAPT ROBERT H. PHILIPS, Infantry

In this era of technological warfare, a great part of every battle is fought in the laboratory, the arsenal, and the proving grounds. To win, we must counter every offensive implement the enemy devises with a better defensive weapon. Offensively, we must develop weapons of our own that are one jump ahead of anything the enemy has to defend himself with.

General J. Lawton Collins, Army Chief of Staff, has stated that our best hope for victory over a fanatical and numerically superior foe lies in the use of high quality weapons.

All of us are encouraged when we read or hear the announcement of a new weapon that will help the earth-bound Doughboy accomplish his age-old mission of meeting and destroying the enemy — an enemy who is sure to use every technological advantage his nation can devise and afford.

But before we can accept a new weapon wholeheartedly, we should make it prove its worth to us in the field. A great amount of testing is, of course, done for us by appropriate agencies before the weapon is adopted. But the most severely tested weapon needs combat field service to prove its true merit.

One of the latest weapons sent to help the flesh-and-blood ground soldier in his fight against steel and lead is the group of recoilless weapons — the 57-mm, the 75-mm, and the 105-mm recoilless rifles. The 57-mm and 75-mm rifles were battle tested to a limited extent in both theaters toward the end of World War II and have seen extended service during the Korean conflict. We can now compile facts of their battle performance and draw appropriate conclusions.

But before we discuss the performance of these weapons, let us take a quick look at some questions we might ask about any weapon of this kind. We shall do this to make sure that we are thinking along the same lines as we examine what the recoilless weapons have done in test and combat.

1. Where has the weapon been used?

2. What can it do? Can it do the job it was designed for?

3. Is it rugged? Can it stand continuous, cross-country manhandling?

4. Is it easy for troops to handle and move about?

5. Does it function in arctic and subarctic climates?

6. How well does it tie in with the over-all infantry weapons plan?

HISTORY AND DEVELOPMENT

The idea behind recoilless weapons is not entirely new. Recoil itself is as old as gun powder and

has been a basic problem in firearms since their earliest use. Recoil is an expression of the physical law that for every action there must be an equal and opposite reaction. For every push there must be a pull.

In World War I, Commander Cleland Davis of the US Navy designed several recoilless guns. He mounted two guns coaxially to fire in opposite directions, with a common breech in the middle. One barrel was loaded with a conventional projectile, while the other contained a mixture of lead and grease of the same weight in a cardboard container. The powder charge was between the two projectiles. The result was a recoilless weapon, but one that was not too practical.

Between wars little or nothing was done to develop a recoilless weapon. In the spring of 1943 our ordnance had finally developed the bazooka (2.36-inch rocket launcher), which possessed some of the characteristics of a recoilless rifle. It had great penetrating power, but its low velocity made for relative inaccuracy and short range. About this same time, Frankfort Arsenal began to develop a recoilless gun and by October 1943 had designed, built, and test-fired a 57-mm rifle that was substantially the same as the present weapon.

Our army is not the only one that has developed recoilless weapons. One was captured from the Germans in our invasion of North Africa, and later, during the invasion of Normandy, several Germal recoilless guns were captured. These operated on the same general principle as our own. The British employ recoilless weapons, as does the Swedish Army. Undoubtedly, all major armies have developed them to a certain degree.

The 57-mm recoilless rifle is a single shot, air cooled, breech loading, flat trajectory weapon that can be fired from the shoulder or any mount accommodating the standard machine gun pintle. It weighs 44.4 pounds, complete with sights and integral mount. (Compare this to the weight of the 57-mm antitank gun, about 2,800 pounds.) It has a muzzle velocity of 1,200 feet per second and a maximum range of 4,340 yards.

The 75-mm rifle, which has the same general characteristics as the 57-mm, weighs 167 pounds with sights and mount. The principal sight is a direct-fire, three-power telescope. A panoramic sight is also provided for indirect fire missions. This rifle has a muzzle velocity of 1,000 feet per second and a maximum range of 7,000 yards.

The 105-mm rifle has been standardized but has not as yet been tested in combat. This weapon is mounted on some type of vehicle such as a jeep or a weasel. It weighs about 350 pounds (less mount) and has a maximum range of about 8,300 yards. Developments are under way to improve the ammunition for the 105 rifle, and it is being groomed to take its place as the battalion's primary antitank weapon.

(Complete details on this weapon were described in "105-mm Recoilless Rifle" in the April issue of the QUARTERLY.)

USE IN WORLD WAR II

Although recoilless rifles were developed too late for extensive use in World War II, test teams

were sent to the European and Pacific theaters. On Okinawa the 57-mm rifle fired at a cave in coral rock 1,000 yards distant, in which a Japanese machine gun was hidden. It sealed the cave with four rounds, two of which were direct hits. Another 57-mm rifle on Okinawa fired at a Japanese pillbox 10 feet square at a range of 1,100 yards. It registered three hits out of seven rounds, demolished the pillbox, and killed eight Japanese in and around it.

A report of the fighting on Luzon states that a 75-mm recoilless rifle was used against dirt and sandstone caves sheltering artillery and machine guns and against bunkers with 12-inch log walls. One to seven rounds were fired at each type target at ranges from 300 to 2,500 yards. Eighty per cent hits were scored on all targets. All observers, according to the report, were amazed at the rifle's accuracy.

In the European theater both of the recoilless rifles were issued to the 17th Airborne Division shortly before its jump across the Rhine. The men were given a short training period with the weapons before taking them into combat. Usually the rifles were carried into the zone of action by glider. At a town called Applehauser, a German self-propelled 88-mm gun opened up on elements of the 513th Regiment. Three rounds fired from a 57-mm rifle at a range of 850 yards knocked out the 88 and killed all of the crew except two, who surrendered. Another report from a unit of the 17th Airborne states that they fired two rounds at a building 800 yards distant with a 75-mm rifle. After the second round had been fired about 100 Germans came out of the building and surrendered. Two 88's were found in the building. One round of HEAT ammuniton had knocked the barrel off one of the 88's and the other round had damaged the breech mechanism of the second gun. The 17th Airborne also used recoilless rifles in the street fighting in Essen. A captured German officer remarked that he did not see how American artillery could adjust fire on one side of the street when their own troops were on the opposite side. He did not realize, of course, that he was being fired on by the American troops across the street with recoilless rifles.

From these reports it is evident that recoilless weapons were rather enthusiastically accepted in the field, and, as a result of these tests and further research, the weapons have been made a part of our Table of Equipment. However, we must bear in mind that these were tests, and although made under combat conditions, the weapons did not have the day-to-day usage in all types of situations that is required of front line weapons.

From the combat reports discussed so far we can draw the conclusions that recoilless weapons are extremely accurate, that they fire a large caliber, high explosive projectile with good effect, and that they are extremely mobile and easy to handle.

BATTLE TESTS IN KOREA

The battle performance of the recoilless weapons in Korea may provide the best evidence of their value, for there they have undergone rough and continuous use. Reports that have come back from Korea so far represent personal

opinion, and vary considerably from unit to unit. No official reports have yet been published that were not highly classified. For this reason information gathered comes from letters written to individuals and to The Infantry School, personal observations, and opinions of personnel who have returned from the combat zone. These observations do not bear an official stamp.

An officer who served as a 75-mm rifle platoon leader is very emphatic in his praise of the weapon. In describing his experience he stated that the 75-mm is proving itself in combat, especially in the kind of war that is now being waged in Korea against a well entrenched enemy, equipped for the most part with small arms and light mortars. When our troops were advancing, this officer stated, the 75-mm rifles were usually moved on vehicles near the rear of the rifle company that they were attached to, roads permitting. When the point ran into trouble the 75's moved right up to a high terrain feature where they could see the enemy and started firing at ranges between 500-1,000 yards. They were usually the first guns after the 57's and 60-mm mortars to open fire. He said that his platoon was able to knock out machine gun nests up to 2,100 yards away with little trouble.

The individual soldiers welcomed the support given by the hard hitting 75's and they drew little fire, the officer said. However, he emphasized the point that the enemy had little artillery to use for counter-fire measures. He felt that the personnel in the platoon should be increased to permit the employment of both 75's in the section at all times. At the present time the platoon is organized into a headquarters and two sections of ten men each with two guns per section. There is a ¾-ton truck and a 1-ton trailer organic to each section now. This officer further stated that everyone he contacted felt that the 75 was doing an excellent job and that the gun stood man-handling and cross-country maneuvering with no ill effects.

In a defensive situation the 75's were seldom employed in section, but were split up with one gun covering a road or likely avenue of approach. An improvement suggested by this officer was to increase the range of the direct fire sight so that targets could be engaged by direct fire methods up to about 3,500 yards. The present direct fire sight is graduated up to 2,100 yards for range.

Another first-hand experience comes from a battalion commander serving with the 2d Division. In referring to the employment of the weapons in his battalion, he stated that recoilless weapons were used in indirect fire missions for the most part. He felt that the backblast did tend to disclose the gun position to such an extent that use on the front lines was not possible. In an attack the 75's fired on the objective until friendly troops masked their fire, then displaced forward.

From the Pusan beachhead came a report that the 57-mm rifle was an excellent weapon for close support of front line defensive positions. This report stated that the 57's did not draw an excessive amount of enemy fire and that when fire was received the weap-

ons could be easily moved to new positions.

A field grade officer from the 1st Cavalry Division sent back his impressions of the 75-mm rifle and sums them up this way:

1. The 75-mm recoilless rifle is definitely a required weapon for the Infantry.

2. It has been used both on and off the ¼-ton truck, and in all cases has been very effective.

3. The weapon has a hard-hitting and an amazing accuracy record in the battalion.

He goes into detail concerning the use of the 75-mm, telling of its use in defensive positions to supplement the artillery and mortars. The rifle knocked out several enemy positions at a range of about 1,200 yards. Later, in the vicinity of the famous "Bowling Alley," the 75's were mounted on vehicles and used to protect the flanks and also to fire to the front. This mission had originally been planned for the tank platoon attached to the battalion, but the tanks felt that they would draw too much 120-mm mortar and other fire, so the mission was given to the 75-mm rifles. They fired about 200 rounds at targets to the front and flanks. Two Korean tanks were disabled when the chain treads were knocked off the tracks by the 75's. These tanks were later finished off by 3.5-inch rockets. This officer further states that recoilless rifles should not be used primarily as antitank weapons because of their limited armor-penetration. Against point targets, however, they are extremely accurate.

A field grade officer in the 19th Infantry wrote this to a member of The Infantry School's Weapons Department:

"You may quote me that the 57-mm rifle is a machine gun killer. I watched four enemy machine guns go up in splinters along with their three- and four-man crews at an approximate range of 1,200 yards. This action took place while the 57's were set up to cover an attacking platoon."

A heavy weapons company commander in Korea had this to say about his 75-mm rifles: "The guns were set up in battery at a range of 1,800 yards. They engaged a reinforced company of Chinese crossing the Han River, which at that time was frozen solid. They fired white phosphorous shells and used direct fire methods. The Chinese, unable to move out of the zone of direct fire (as they might have done had it been artillery fire), were virtually annihilated in their attempted crossing."

A former heavy weapons company commander brought back this tale of "reverse English" from Korea. A Chinese prisoner once told this company commander through an interpreter that he knew where an American 75-mm rifle was buried. The prisoner led the Americans to the spot and they found the weapon under about three feet of earth. When asked why the Chinese had buried the weapon, the prisoner said that his unit had been instructed to turn all captured weapons around and fire on the retreating Americans any time a position was overrun. He said that a Chinese lieutenant was standing directly behind this particular weapon, directing the fire. When the trigger was pulled, the lieutenant practically disintegrated in the backblast. The Chinese then buried the weap-

on, believing it to be some kind of a booby trap.

The backblast of the 75-mm rifle was responsible for another strange tale. A gun crew moved through some tall grass around a hill to fire on an enemy tank. They found a good position and fired one round. Just as they fired, they heard a medley of screams immediately behind them. A quick investigation revealed three dead and one dying Koreans, victims of the backblast. They had apparently been stalking the crew and had just about gotten into position to do some damage when the first round was fired.

The question about the use of recoilless rifles against tanks usually comes up in any discussion of these weapons. Just what will they do against armor?

We know from experience that the recoilless rifles can sometimes stop enemy tanks. In the defense, the 75-mm rifle is used in an antitank role, being the best antitank weapon at medium ranges that the Infantry battalion has.

Ordnance, realizing the need for a more powerful antitank weapon for front line use, is experimenting with new ammunition for our present recoilless rifles in an effort to get greater penetration, and, in addition is developing the new 105-mm rifle.

Airborne units in training are especially high in their praise of recoilless weapons because the extreme light weight and mobility of the guns makes them more suitable to air drop. No reports have been received, however, from any airborne unit in Korea on their use of recoilless weapons.

Reports from our testing teams in the Arctic and from officers who have observed most of our weapons being fired under adverse weather conditions bring out the fact that recoilless weapons perform well in sub-zero temperatures because of the small number of moving parts. While automatic weapons are hard to keep firing at times because of the movable bolt, this trouble is not encountered with recoilless weapons. Both the 57-mm and the 75-mm stood up under the toughest Arctic weather conditions of firing and man-handling.

Army ordnance is continually improving and experimenting with all kinds of weapons. New developments in recoilless weapons are directed toward the reduction of the backflash, increasing the rate of fire, reducing the erosion that sometimes occurs in the breech mechanism, reducing the weight of the weapons, improving the mounts and reducing their weights, and applying the recoilless principle to weapons of larger caliber.

SUMMARY

Battle reports from World War II and the Korean conflict for the most part agree that the recoilless weapons are extremely accurate, destructive, and easily handled in the field. Although light in weight, no reports have been received of the weapons breaking down from rough handling or continuous use. They seem to fill a long-felt need for close support to front line troops. The weapons have been given missions that tied them in closely with other weapons of the Infantry regiment. Both on offense and defense they were given certain tasks normally assigned to close supporting weapons and were not reserved for specialized uses.

In reference to the greatly dis-

cussed backblast, it seems that, generally, the rifles did not draw any more fire than other weapons of comparable size — which may have been due to the fact that the enemy did not always have artillery and mortars readily available. Although one battalion commander stated that he felt compelled to use his 75-mm rifles in indirect fire missions so that they would not draw fire, we can conclude that, with the use of great care in selecting gun positions, the backblast should not reveal positions to a great extent.

The weapons are light enough for airborne use and have given satisfactory performance in Arctic tests.

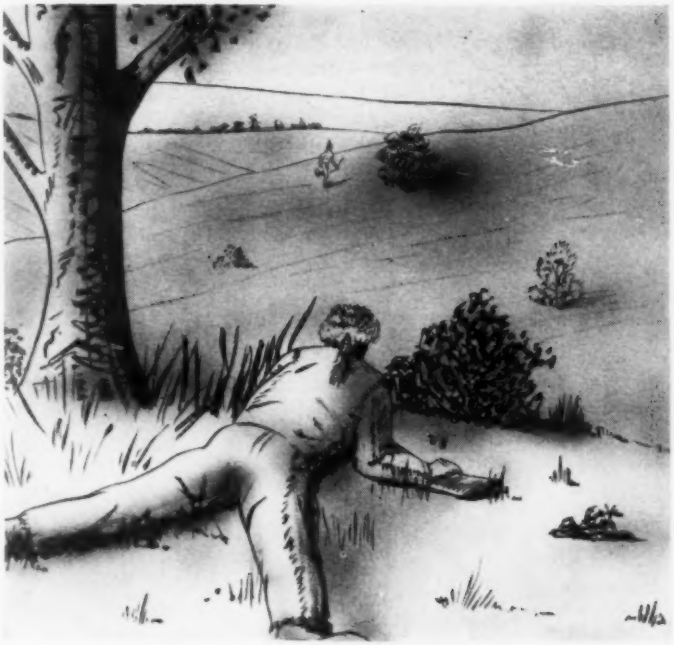
The shells from these rifles have a limited armor penetration, but the weapons are adaptable to antitank roles in the defense. The new 105-mm rifle appears to be the answer to the battalion's antitank requirements.

The graduation exercises for the basic class in horseshoeing were held this morning at The Infantry School stables.

— *Infantry School Diary*, 28 February 1930

NIGHT PATROLLING

By CAPT FRANK F. RATHBUN, Infantry



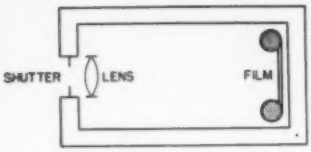
Every unit in the Army depends for its success on the men within it. A patrol may have two men or as many as two hundred. But it is made up of men. It will accomplish its mission only to the extent that each man in it does a good job.

Let's take a look at some of the things an individual soldier needs to know before he can make a good patrol member.

The pioneer settlers of this country, whose lives often depended on their ability to outwit the Indians, had a wise rule:

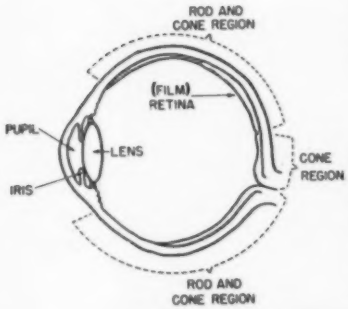
"See the enemy before he sees you!"

Your success — even your life — on a night patrol may depend on your ability to follow this rule. Nature has provided you with the same equipment the Indian fighters had. But a little knowledge about the human eye and some practice in using it to see at night will help you get ready to use it when you need it most.



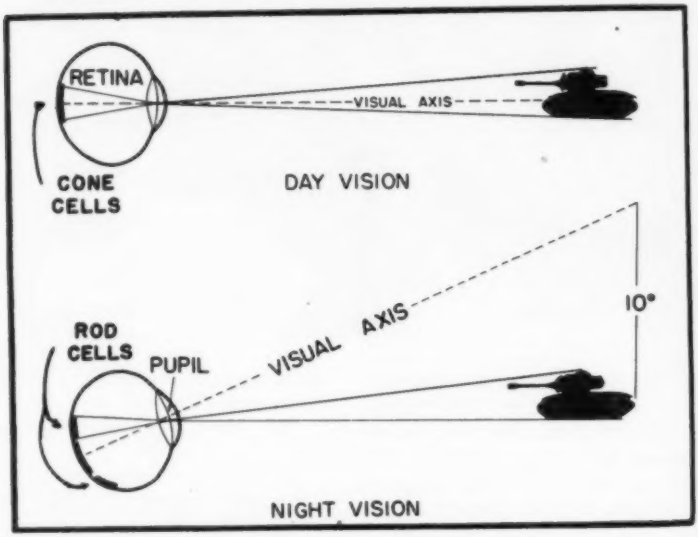
YOUR EYE

Your eye works something like a simple box camera. Both your eye and the camera have a shutter and a lens to admit light, and a sensitive part in the back that reacts to light and fixes the image. This sensitive part of the eye is called the *retina*, while in the camera it's the film. Light enters the camera through the shutter and lens and the image is focused on the film. We know that different types of film are sensitive to different degrees of light.



Light enters the eye through the pupil and lens, and the image is formed on the retina. Certain areas of the retina are sensitive to different degrees of light. In the center of the retina, for instance, are vision cells called *cones*. We use these to see in the daytime.

In the off-center areas of the eye are the *rod* cells. These are very sensitive to light and give us our night vision.



HOW WE SEE

The meaning of these *rod* and *cone* cells to us is simple. In the daytime we see by looking directly at an object, using the *cone* cells.

At night we see by looking slightly away from an object, using the *rod* cells in the off-center areas of the eye. In other words, to see at night you don't stare directly at an object. You look slightly to one side, over, or under it.

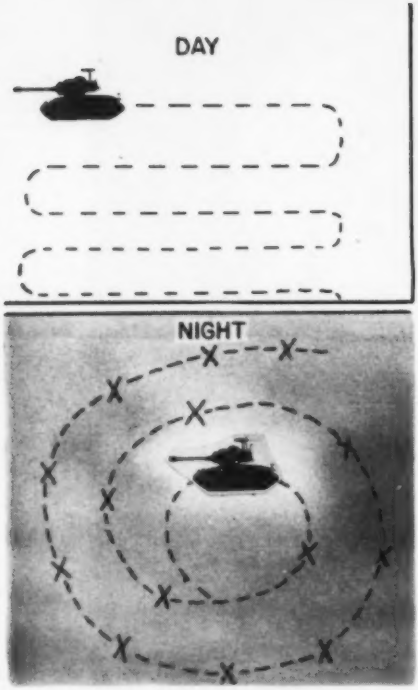
And when you see it with the off-center area, don't look too long. The image will fade. Keep moving your eye to all edges of the object.

DARK ADAPTATION

The rod cells that enable you to see at night don't function until they have been given a period of time in the darkness. During this time the iris opens wider to admit more light, and the rod cells start making a chemical called *visual purple*, which makes it possible for you to see at night.

This process is called *dark adaptation*. You can become dark adapted by sitting in the darkness for at least 30 minutes. Another method to start this process, in case your duties require you to stay in a lighted place like the patrol leader here, is to wear goggles with red lenses. Wear these for 20 minutes before going out and you'll need only ten more minutes in total darkness to complete your dark adaptation.

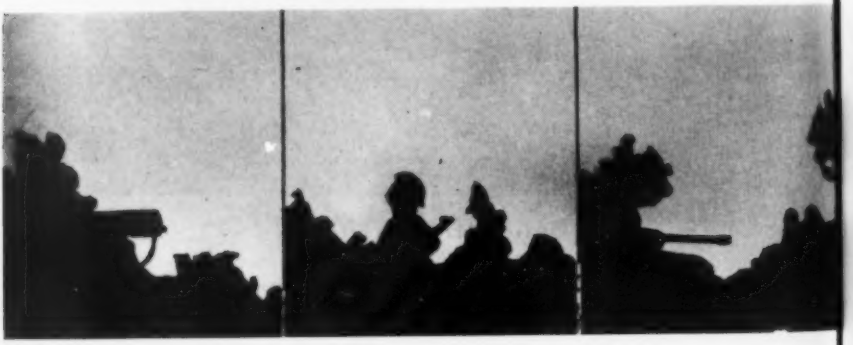
Remember this: Even a quick, bright flash can spoil your dark adaptation for several minutes. Don't look at a flare, headlight, or gun flash. If you *must* use a light, look at the lighted object, not at the light.



SCANNING

To observe in the daytime you have been taught to search the terrain in overlapping strips 50 yards deep or less. When you see a suspicious spot you stop and search it more closely, concentrating on that area.

This won't work at night. You have to *scan* the area. Scanning means to search the darkness in short, abrupt glances, with brief pauses between each movement. Dart your eyes in a circular manner so that your line of vision will fall over and around any possible object in front of you.



CONFIDENCE

One of the biggest aids to night vision lies right in your own mind. It is called *confidence*. Confidence comes from practice.

Learn to know the night shape of things and learn to know them by seeing only a part of them. Learn to combine what you see with what you smell, hear, or feel.

Practice identifying the silhouette of weapons, vehicles, terrain features, structures, individuals — even uniforms. Be able to adjust and operate your weapon and other equipment by feel.

NIGHT CONCEALMENT

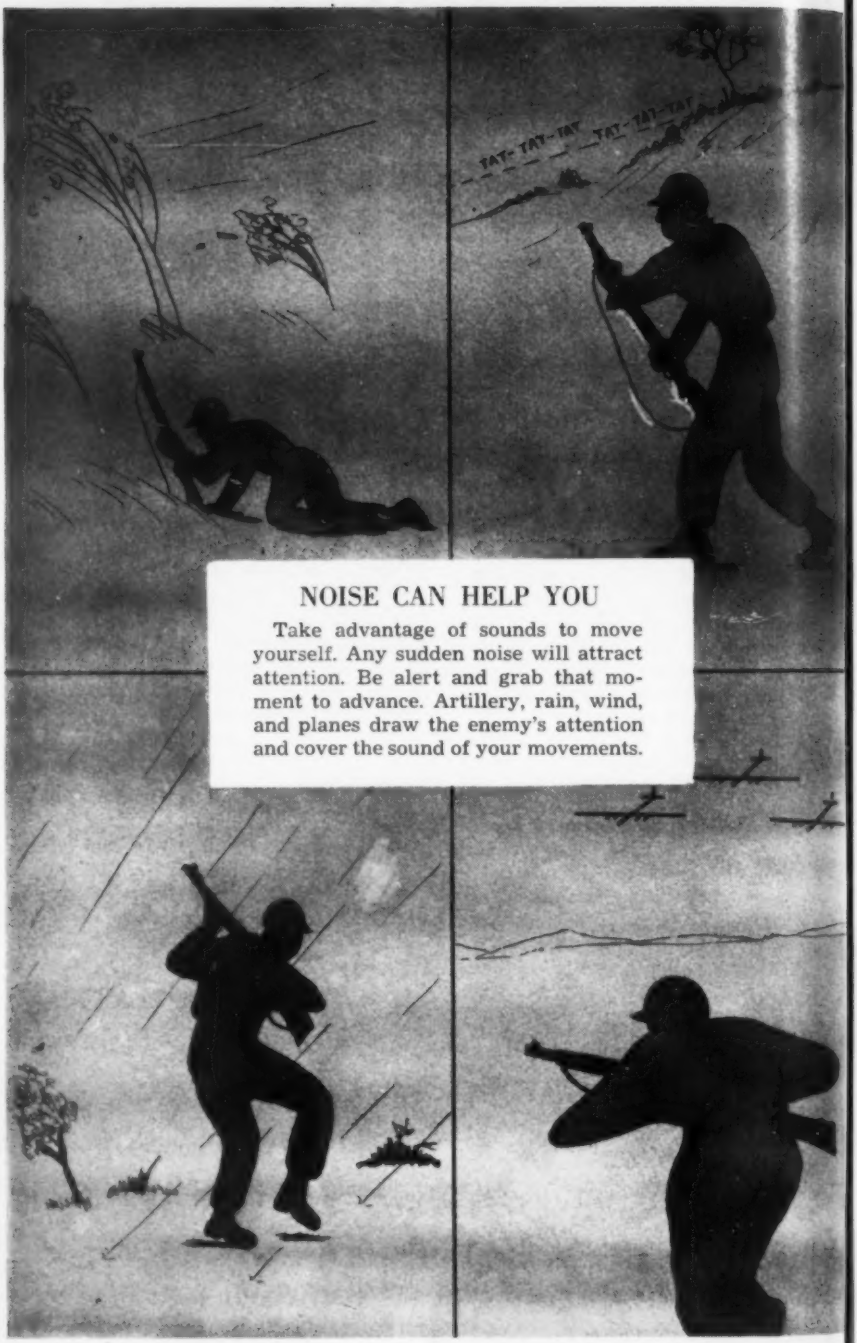
Darken all your equipment and cover anything that might gleam in the moonlight. Blacken your face completely with soot, charcoal, lampblack, burnt cork, or anything dark. Don't use anything greasy, because it may reflect light. Be sure the blackening covers all exposed skin, including the back of your neck and hands. Wear clothes that blend with the background.

The darkness furnishes most of your concealment at night, but you will want to take advantage of anything else that will make it harder for the enemy to see you. Stay in low places as much as possible and off the skyline. Avoid thick woods and brush, because the noise you make in it at night will do more harm than the good its concealment does. On a moonlight night, stay in the shadows.

LIGHT AND YOUR EYES

A flare may light up in the sky at any time. The first burst of light is temporarily blinding. Take advantage of this blinding effect and hit the ground. Of course, if you hear the flare fired, drop before it lights. If you want to take advantage of the light for some observation of your own, keep one eye closed or hold your hand over it.

Keep every sort of light concealed. You can see the light of a common match up to ten miles away. If you must use a light, find a concealed position and shield the light carefully with a coat or cap. Use the light for as short a time as possible.



NOISE CAN HELP YOU

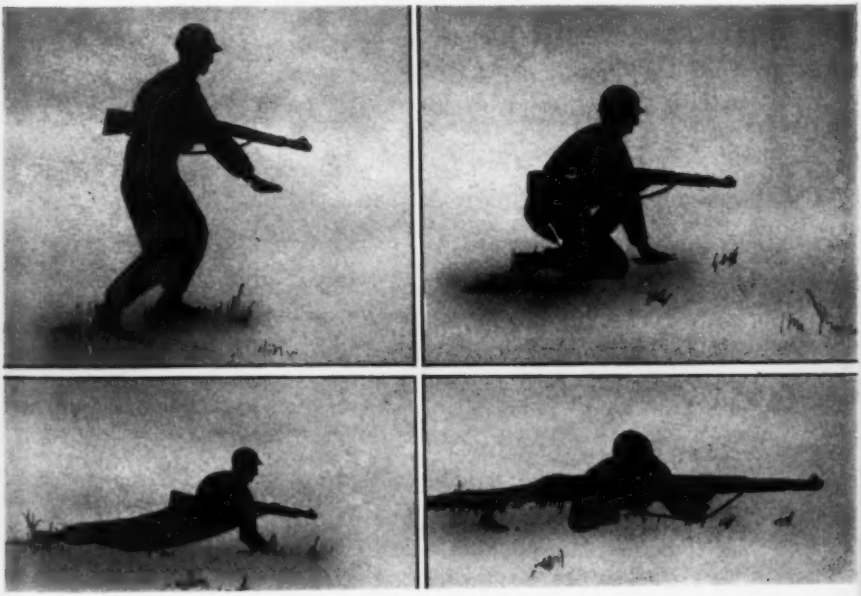
Take advantage of sounds to move yourself. Any sudden noise will attract attention. Be alert and grab that moment to advance. Artillery, rain, wind, and planes draw the enemy's attention and cover the sound of your movements.

NIGHT WALKING

To make your footing sure and solid, keep the weight of your body on your rear foot as you step. Raise your forward foot high to clear any brush or grass. Then, toe first, still keeping your weight on your rear leg, let your foot down silently to the ground. Since you can feel best with your toe, you can pick out a good spot. Lower your heel after you find a solid place. Then, and not until then, shift your weight and balance to your forward foot.

HITTING THE GROUND

The method used to hit the ground in the day is too noisy. At night, crouch slowly, feeling for the ground with your free hand. Hold your rifle under your arm. Support your weight on your free hand and opposite knee. Raise your free leg up and back, and lower it silently to the ground. Roll gently to that side and lower your other leg in the same way. Roll quietly back into the prone position.



NIGHT CRAWLING

The method of crawling used during the day is also too noisy. So, crawl on your hands and knees. Lay your rifle on the ground by your side. With your right hand, feel for or make a clear spot for your knee. Keep your hand on the spot and bring your right knee forward until it meets your hand. Clear a spot and move your left knee up in the same way. Move your rifle in a similar manner. Feel for a place, clear it, and lift your rifle into position. Make all of these movements slowly and in absolute silence.

Practice this crawling! It won't come to you the first time you try it.

CROSSING OBSTACLES

Whenever possible avoid obstacles, especially when the enemy has them covered by fire. Find another route.

Wire obstacles are the most common. Sometimes you may hit a wire obstacle that you can pass over. Sling your rifle before you start crossing. Lightly take hold of the first strand and cautiously carry one leg over the wire you hold. Lower your foot to the ground, toe first. Feel carefully for sure footing. Bring the other foot over the wire. Quietly release the wire and feel for the next strand. Cross it in the same manner. If a flare bursts while you are crossing the wire, crouch low and stay still.

GOING UNDER

It is often best to go under the wire, especially at night. You don't expose yourself as much and you can see better.

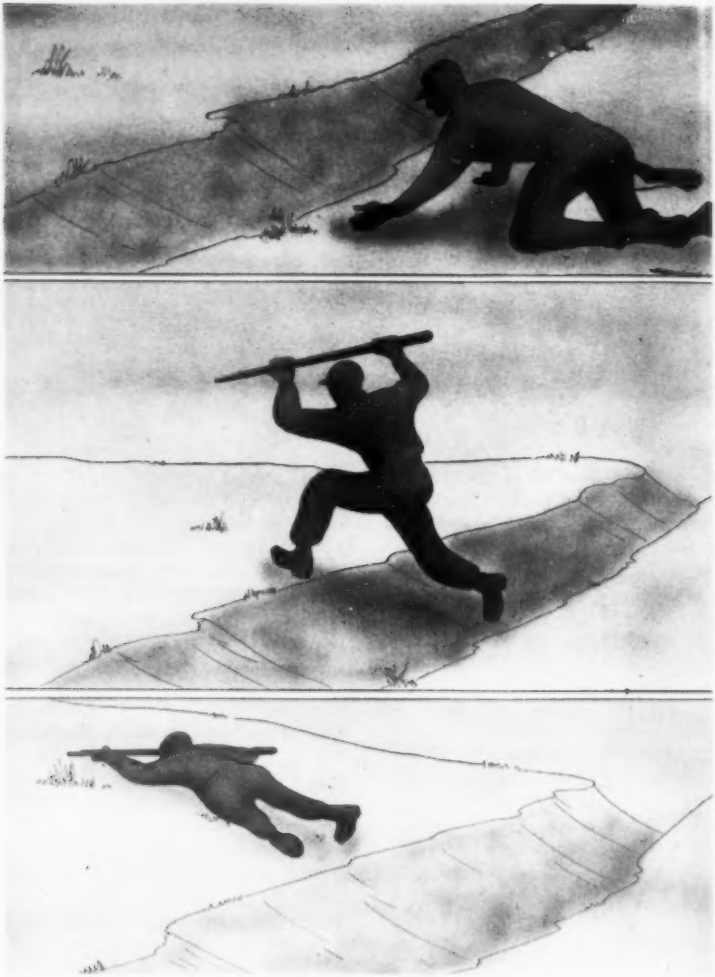
Slide under the bottom strands on your back, using your heels to push yourself forward. Inch your way along, holding the wire up with your hands. Feel ahead of you as you move because there may be low strands or mines in your path. Go through head first, carrying your rifle lengthwise on your stomach, leaving both hands free to handle the strands of wire. Do not tug or jerk on the wires.

CUTTING WIRE

Sometimes it is necessary to cut your way through wire. If so, cut only the lower strands, leaving the top wire in place. This makes it harder for the enemy to discover the gap.

When you are alone, cut the wire near a picket. Keep the loose ends from flying back, for the sound might attract the enemy's attention. Wrap cloth around the wire, hold the wire with one hand, and place the cutters between your hand and the picket. Cut through the cloth to muffle the sound of cutting, slowly bearing down until the wire separates. Carefully roll back the loose strand.

When you have someone with you, have him hold the wire with both hands. Use cloth and cut the wire the same way, cutting between your assistant's hands. Then he quietly bends the loose ends back.



CROSSING DITCHES

Your route may be blocked by ditches and intrenchments, some of which may be wide. If so, climb quietly and carefully down one side and up the other. If the ditch or trench is narrow, it may be jumped. Select a point some distance from a junction with a connecting trench, crawl up to the edge, and cautiously look in. Be sure you have firm and quiet footing on both sides. Rise and jump across. Land on one foot and drop quietly to the ground. Lie still for a moment. Listen before you rise and go on.

KEEPING DIRECTION

Finding and keeping your direction at night is easy, so there is little reason to lose your bearings if you are careful and don't get excited. Keep track of where you are and the direction to other places in the area. Remember the terrain features and other outstanding objects you pass so that you can recognize them if you pass them again.

Your map and compass are good aids to keeping your direction, but may be a little slow at night. The use of terrain features, after you have made a good map study before going out, is one of the best and quickest ways of keeping direction.

Choose a route that you can follow easily, rather than the shortest one. Select one that has good features upon which to guide and that avoids obstacles and enemy positions. Then select an alternate route and study it until you know it as well as you know your first one.

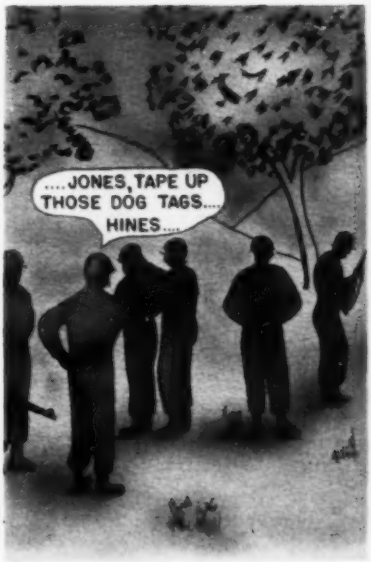
When you are moving at night, stop often. Turn around and check on your position and direction.

GETTING READY

A patrol leader has many little details to attend to in getting his patrol ready to go. Usually, he picks an assistant to supervise the preparation of the other members. Some of the men obtain rations, water, ammunition, and special equipment. Everyone dresses in the prescribed uniform, and removes all identification except dog tags. They camouflage their faces, hands, and equipment. They check their weapons and put them in good working condition, and they get as much rest as possible before the patrol leaves. The patrol assembles at the set time to receive final instructions from the patrol leader.

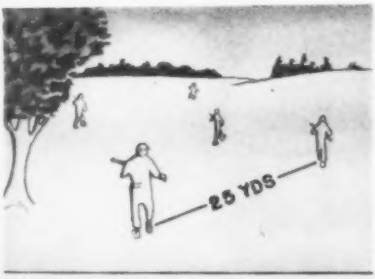
PATROL INSPECTION

The patrol leader inspects each man as soon as he selects him for his patrol and before going out, to see that he is in good physical condition. A man who is coughing or sneezing, or who can't keep up with the rest of the men has no place in a night patrol. The leader also checks each man's clothing, examines his equipment for completeness, and checks for noise-making equipment by having each man jump up and down. He looks for shiny equipment and makes sure that each man's weapons are in operating order. He checks to see that there are no identifying letters, maps, or diaries on the men. There should be no sign of identification except dog tags. He checks each man for camouflage of person and weapons.



PICKING A ROUTE

A lot of a patrol's success in moving at night depends on the selection of a route. Plan your way to the objective — and back — so that you can move as much as possible in the open and so that you will have prominent terrain features to guide on. If possible, plan to approach your objective from the rear. Your return route may be different from the approach. Stay away from brush, woods, and vineyards where you will make noise. Stay off the skyline. Detour around pastures or fields that have animals in them, because they may hear you and betray your presence. Keep away from barns, farmyards, and houses. They may contain enemy or unfriendly natives. It is all right to use roads and trails as a guide. If silence is so important that you must move on roads or trails, stay along their edges, and be prepared to meet enemy patrols moving along the same route. Plan your route to bypass known enemy positions.



CONTROL

Close control of every man in the patrol is vital at night. Each man must keep contact with the others and be able to see the man to his front or flank. This not only keeps him from becoming separated from the rest, but makes it possible for him to receive signals and orders. Each man should learn to increase the distance between him and other patrol members when visibility is good. Specialists attached to the patrol should stay in the center of the formation.

PATROL FORMATIONS

A small patrol uses rifle squad combat formations, adapting them to the number of men in the patrol. A single file formation is often used to increase control and maintain silence for small patrols. While using this formation patrol members are assigned sectors of responsibility for all around observation to maintain all around security. If a patrol is larger than a squad, the patrol leader usually breaks it down into two or more small units and uses the combat formations of the rifle platoon. A large night patrol generally uses a column formation.

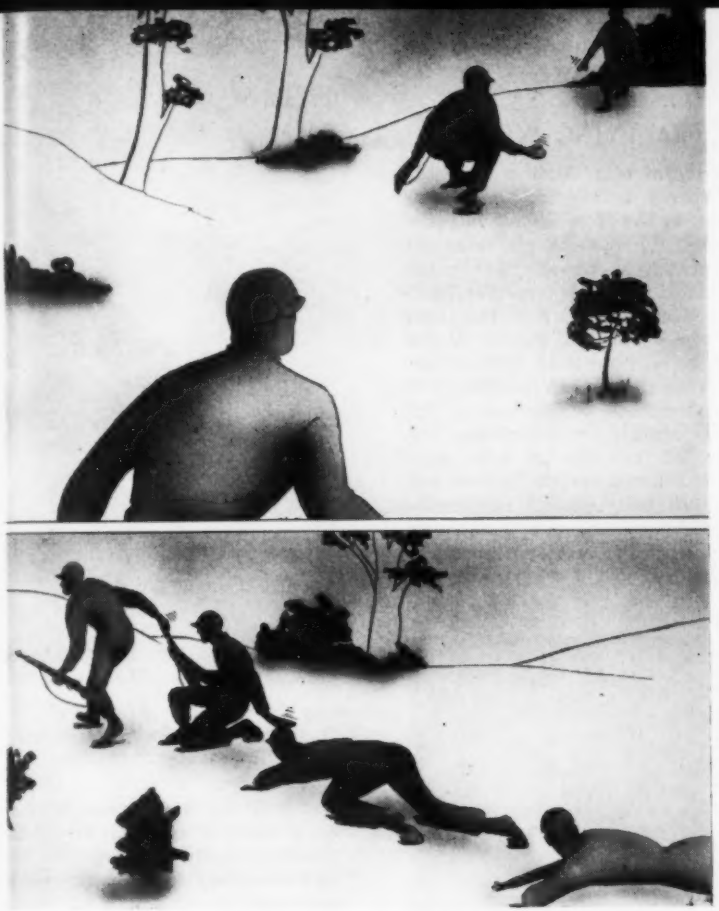
The diamond formation gives good control and readiness for action in any direction.

THE COLUMN

A column formation gives the closest control and favors action to the flanks. It is especially useful on very dark nights and in places where movement is restricted.

SINGLE FILE

In extreme darkness you may have to move in single file with just a few feet between men.



TOUCH AND SOUND

The surest way to control the men and their actions is for the patrol leader to halt the patrol, move to each man, and whisper orders to him. It may be possible for the patrol leader to devise some kind of sound signals, such as tapping two stones or sticks together. These sound signals must be used as little as possible, and they should have a natural sound. The patrol leader should practice them with each man before the patrol goes out, and he uses them only as emergency signals. Bird or animal calls are not advisable, because few men can give them naturally, and animals usually flee an area where there is fighting.

Usually there is enough light for the leader to use arm and hand signals. These too should be practiced with each member of the patrol before going out.

Touch signals are good on very dark nights. The patrol leader touches the man nearest him with the touch signal and this man passes it back to the man behind him. Men behind watch the men in front and base their movements on them. This method is slow, but is quiet and effective, especially when the men get used to working with one another.

RALLYING POINT

A patrol may become separated by enemy action or some other cause. It would be almost impossible for the men to get back together again unless they made plans to do so. This is accomplished by selecting rallying points along the route. These should be located near some prominent terrain feature that all men can recognize and remember. On a day patrol, the leader could point out distant features, but at night he stops right at the selected terrain feature and says, "Right here is our next rallying point — you can recognize it by that clump of trees at this end of the bridge."

SECURITY

The patrol leader uses one or two men as a security element to search possible danger areas. He halts the patrol occasionally to listen and to observe for enemy activity.

One of the greatest dangers to a night patrol is ambush. The leader avoids ambush by using the best formation for the particular spot he is in and by making good use of his security element to search out likely danger areas before moving the whole patrol into it. Be alert at all times and have a plan ready for any situation. Likely danger areas are such places as roads and trails, narrow gullies, stream crossing sites, and villages. Put yourself in the enemy's position and try to imagine where you would set up an ambush. Halt your patrol before entering any such areas; then study them and send out your security element. Avoid a route recently used by another patrol, because the enemy may set a trap along it, hoping to catch the next patrol.

AT THE HALT

When a patrol halts, the men get down in the prone position to present a low silhouette themselves, and, at the same time, to silhouette anyone who approaches against the skyline. Also, the men are able to hear best when their ears are close to the ground. The men take positions that give all-around protection to the patrol, and each one watches and listens for sounds of the enemy. During the halt, the second in command checks with the leader for instructions. They both check for the presence and position of every man. They make sure, when moving forward again, that every man is following.

ACTION AT THE OBJECTIVE

The patrol leader halts his patrol near the objective in an area that is favorable for defense. He designates an alternate position for the patrol in case enemy action forces it to move. He turns the patrol over to a second in command and, selecting one or two men to go with him, goes on to reconnoiter the objective. He instructs the second in command to have the patrol ready to defend itself from any direction, to remain silent, and to await his return or the passage of a certain length of time. If he doesn't return within a certain time, the second in command does whatever he thinks necessary to accomplish the patrol's mission.

The patrol leader tries to approach the objective from the rear, moving slowly and patiently. He stops frequently, waiting for the enemy to move or make noise. He gets all the information he can in one position, then moves to another part of the objective to observe and listen. He continues doing this until he gets the information he desires, then returns to his patrol.

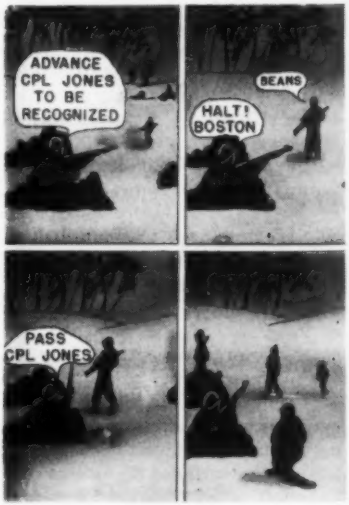
Upon his return to the patrol, he tells every man what he saw and heard so that any one of them can report the findings in case the others become casualties.

GETTING BACK

The patrol cannot relax its alertness on its return to friendly positions. It approaches friendly lines just like it approached the enemy. All patrols are regarded as enemy until proved otherwise. It is up to the patrol leader to use the proper procedure to get all his men back through friendly lines, and he should do this as quickly and quietly as possible.

INTO FRIENDLY LINES

When the patrol approaches a friendly sentinel it will be challenged by someone shouting "Halt!" The patrol will not take for granted that it has reached a friendly sentinel. It will use the same caution that the sentinel does, because an enemy patrol may be there playing a trick. Upon hearing the challenge, the patrol leader halts and waits for the next question. He will be asked who he is. He answers by giving his name and identifying his patrol. Usually the sentinel will ask him to advance closer. The sentinel, in a low voice, will give him the challenge — for instance: "Boston." The patrol leader will answer with the password — for example: "Beans." The sentinel may ask other questions if he is not sure who you are. Or, you, as the patrol leader, may want to make sure by asking other questions. When both are satisfied, the patrol leader goes to the sentinel and stays with him while all the men of the patrol pass by one by one. He identifies each man as he goes by.



REPORTING

The patrol leader reports to his unit commander immediately upon return. The unit intelligence officer may question him and each member of the patrol. In making his report, the patrol leader should use a map or aerial photograph to point out specific areas or locations where he obtained information. He reports every scrap of information, no matter how insignificant it may seem to him. Little bits of information from many sources tell the intelligence officer a lot more than you would imagine.

The patrol leader's report should cover all these points:

1. Designation and size of patrol.
2. Time of departure and return.
3. Route patrol followed.
4. Condition of the terrain covered.
5. Information of the enemy, including
   *S*ize of the enemy
   *A*ction and armament
   *L*ocation and disposition
   *U*nit identification
   *T*ime enemy was seen
   *E*quipment
6. Results of any action with the enemy.
7. Disposition of dead or wounded members of patrol.

RIFLE PLATOON IN ATTACK OF A FORTIFIED POSITION

By CAPT CHARLES K. BLUM, Infantry

As they moved up that morning to the assembly area in Alster Woods, they had been able to hear planes bombing the enemy's fortified line along Weiler Ridge — planes softening up with heavy bombs and napalm the enemy pillboxes with which their platoon would soon be engaged.

Somebody in the marching column had taken off his helmet, waved it at the planes as they passed overhead toward the ridge and yelled: "If you miss the pillboxes, make some big craters for us!"

Sergeant Mons grinned at memory of that scene. He was still grinning as he stopped at the prone shelter of his assistant squad leader in the assembly area.

"Let's check the men in our assault team, Mac," he said.

"Right." His assistant climbed to a place beside him. "I heard Murphy grumbling a minute ago about the weight of his flame thrower."

"Murph's a big man," observed Mons. "That's one of the reasons why he's carrying one of our flame throwers."

"Yeah, that's what he's saying, too."

Sergeant Mons checked off rapidly in his mind the organization of his special assault team, made up of his full strength squad plus the rocket launcher team. He and his assistant squad leader led the team. There were two men in the AR team, two men with the rocket launcher, and a single rifle grenadier — these men to provide close support by firing into the pillbox's embrasures. Two men with bangalore torpedoes — with which to breach wire or to destroy obstacles between the line of departure and the pillbox to be assaulted. Two men with flame throwers — to cast flame into the pillbox embrasures in order to kill the enemy or to drive him back from the firing hole. And then two men with pole charges — these to be placed in pillbox embrasures and exploded to destroy the defenders by shock or concussion and to damage the embrasures and weapons inside. A total, in all, of 13 men.

He noted with approval once again the flexibility of that organization — at least two men with equipment for each special job of the assault team.

In ten minutes of quiet attention to a detailed inspection of his men and their equipment, Mons found everything in complete readiness for the job of pillbox killing. He turned away from the last man.

"Not bad, Mac," he said to his assistant. "Not bad at all. Actually," he stared straight ahead, while his words were deceptively smooth, "I'd be disappointed now if we didn't have to do this thing."

That stopped Mac in his tracks.

He stared at his squad leader's impassive face and fumbled for an answer, but couldn't find it until a sudden explosive force flung out one accusing sentence: "Mons, darned if I don't sometimes think you mean it!"

Mons, however, didn't hear him. His eyes had caught the figure of the platoon messenger entering the assembly area.

The messenger signaled to Mons and called: "Squad leaders and the light machine gun team leader are to come up with me to meet Lieutenant Adams and get the attack order."

"Roger," answered Mons. "Be with you in a second."

He turned to his assistant. "Mac, take over until I'm back. Rest is what the men need most now. And a bit of chow in their bellies for the work ahead."

"Right, sergeant."

With a nod, Mons turned and joined the little group of squad leaders gathering near the messenger. They had to wait a minute until the leader of the attached 57-mm rifle squad joined them, and then they trailed off after the messenger, north through Alster Woods.

The messenger led them with quick steps through large trees spaced evenly as though in some huge park. Tanks could get up through trees like this, Mons thought — and added a quick hope that they had.

As they neared what Mons figured to be the north limits of the woods, their guide slowed. Careful still to maintain their distance from each other — and now to get an extra tree or bush between them and the terrain to their front — the little group moved cautiously until through the trees they could see the edge of the woods and the dirt road which skirted it.

"What glorious deep ditches," Mons marveled in a low voice to his nearest companion, when he saw the road and deep ditches on either side of it.

"Like a country road around Fort McClellan in Alabama," came the reply. "And I'm sure glad to see them."

"So'm I," declared Mons.

Crawling the last few yards, Mons slid over into the ditch on the near side of the road. He saw Lieutenant Adams a few yards away. The lieutenant was sitting with his back up against the bank, studying his men as they crept one by one into cover.

When their eyes were all on him at last, he jerked his head over his shoulder and said:

"Well, there it is — about 600 yards north of here."

He riffled some papers in his hand.

"I have a sketch of the area for each of you. We'll take a look at the terrain and get ourselves oriented before I give the order. Here —," he began passing out the sketches.

"Are the men in the platoon ready to go?" he asked, as the sheets of paper were passed around.

Each squad leader answered, "yes."

"The assault team in good shape, Mons?" he questioned.

"Yes, sir."

"Did you run another rehearsal with each man on his part in the assault team?"

"Right, sir — I did. Most of the men are in the same jobs they had

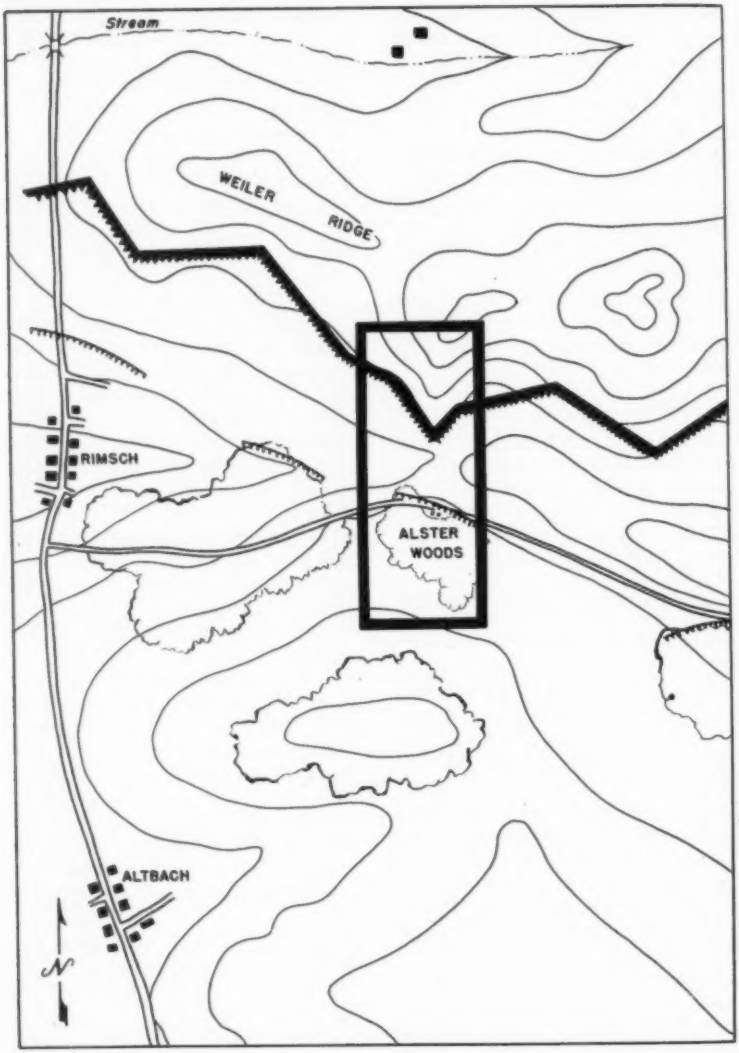


Figure 1. Area of operations.

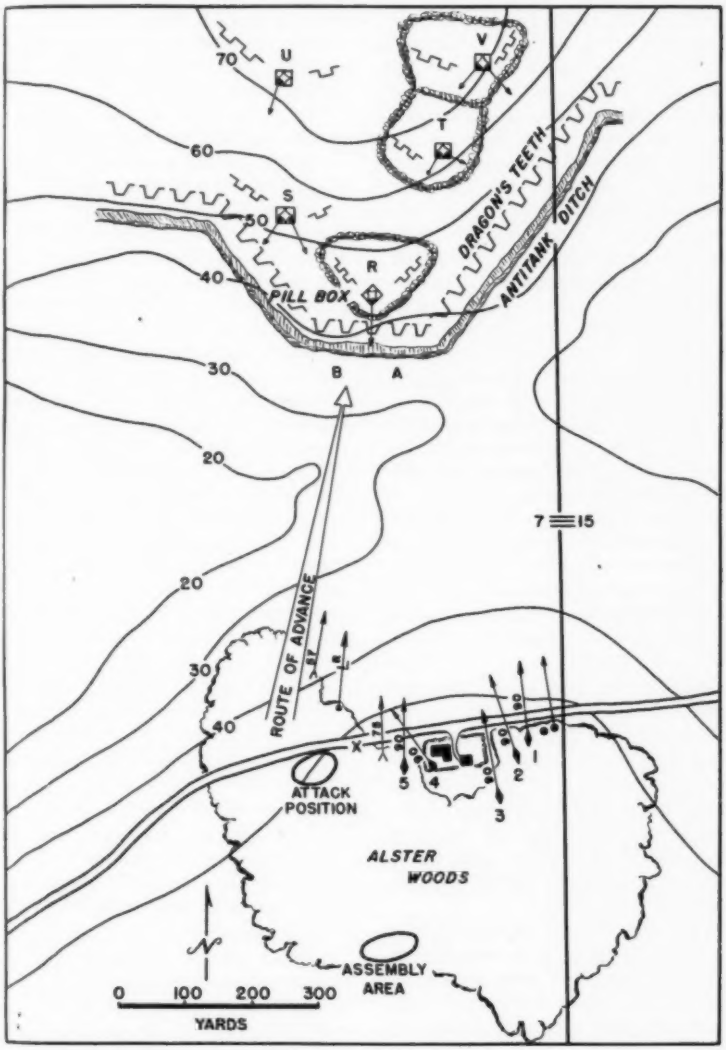


Figure 2. Operation sketch.

when we had a dry run that time we were out of the line last month."

"Good. We're up for record this afternoon."

Every man had a copy of the sketch by now. Lieutenant Adams tapped a stub of pencil against his as he continued:

"The assembly position for the platoon is marked here on the sketch in the southern part of Alster Woods. Right here," he said, and he leaned over to point out the position on Sergeant Mons' sketch with his pencil. (See Figure 2, Operation Sketch.) "Everyone have that spot?"

"All right, then. We're at the point I've marked with an X — in the ditch along the road where it enters the northwestern tip of the woods." His pencil tapped on Sergeant Mons' sketch again.

"If you look over there to the east," he pointed in that direction as he spoke, "you can see the house, which shows on your sketch. There's not much left of it, as you can tell even by the little we can see from here.

"Notice how the woods jut out over here on the other side — the northwest. We can't go down in there right now — don't want much movement there before the attack begins because our platoon and the 1st Platoon will jump off from its tip. 1st Battalion now holds the north edge of Alster woods on both sides of us.

"Incidentally," he continued, his voice mild but with a warning in it, "when you lift your heads to look around, do it carefully — and don't raise your heads too high."

"Do these weapons you've marked on the sketches — the 75's and heavy machine guns and tanks — represent positions of actual weapons that will support us?" asked Sergeant Mons.

"Right," nodded the platoon leader. "I'll tell you more about them in the order."

"I'm glad to see those tanks," another of the noncoms spoke up.

"Tank fire into the embrasures of the pillboxes out there will be a big help," agreed the officer.

"The light machine gun and the 57-mm rifle marked on the sketch are where we'll put ours?" asked another voice.

"Right. You're getting a little ahead of me, but that's where they will go."

Everyone studied the positions marked on the operation sketch in silence. Finally the officer said:

"Okay, let's take a look at what lies north of this woods. That's where we have to go this afternoon. First, notice how the ground drops off to the left, to the west. By jumping off from the tip of woods out there to our left front and following the arrow I've marked on your sketches to the antitank ditch in front of pillbox Roger, we will be protected from fire coming from the east — from our right. Does everyone see that?"

He looked around.

Heads nodded soberly.

"That's about the best we can do for cover," Lieutenant Adams said in a quiet tone. "That and get across the open ground to the antitank ditch as fast as we can."

He fell silent while the noncoms studied their sketches and then raised their heads cautiously to study the actual ground he had just described. When the last man had settled back again, he said:

"Notice the dragon's teeth and

antitank ditch in front of the pillboxes directly to our front — and the concertina wire around those enemy boxes. I've marked only the wire around the pillboxes in our platoon zone of action, but you'll see when you look at the ground itself that all the boxes are protected by close-in barbed wire obstacles. You probably won't be able to see the trenches marked on the sketch, but some of the bomb craters show up well even from here. There are some new ones since this morning."

Again he waited while the men studied the sketches, raised their heads to find on the ground the points to which he had referred, and then resumed a study of their sketches. He was proud of these men — proud of their business-like approach to the task at hand and of their quick understanding of the things he had to tell them. A competent team, tried and tested in past actions.

He waited now for them to finish their study of the terrain and the sketches.

At last he asked: "Anyone have any questions on the terrain?"

"The pillbox marked Victor seems to have been hit by a plane this morning," observed Sergeant Mons.

"It was," answered the lieutenant. "Hit and — we believe — put out of action. But we can't be sure until we get there."

"Did Aggressors stay out in those open trenches after the napalm and bomb attack?" someone asked.

"Probably so," said the officer. "Some of them anyhow. We'll have to believe that some of them are still there — that they survived the bombing and strafing or that they have gone back since the attacks. There'll be both mortars and artillery — firing high explosive and white phosphorous — to make them keep their heads down when we take off."

"Good," someone muttered; and somehow that remark, not humorous at all, caused a concerted chuckle to rise from the group. The squad leader who had unwittingly caused it looked up in surprise.

Lieutenant Adams opened his notebook and began his order:

"The Aggressor troops facing us are well-trained — and those pillboxes are fully manned. Each has sleeping quarters under it for 12 to 15 men. Your sketches show where the firing embrasures are on each pillbox. Remember, each firing embrasure opens on a separate room, protected from any other firing room in the pillbox and also protected from the sleeping quarters. Don't forget that today. *Every embrasure must be destroyed and every entrance door blocked and guarded* until our support can clean out the boxes and engineer troops blow them up."

He looked around at his men. "Any questions on that?"

When there wasn't any, he continued:

"Our battalion attacks to seize that part of the fortified ridge which is to our front, with Fox Company on the left and this company on the right. The 15th Infantry is on our right. The boundary's shown on your sketches." He paused for them to take a look at their copies. "In our company, 1st Platoon is to capture pillboxes Sugar and Uncle, 2d Platoon is in support.

"Artillery — and there's plenty

of it this time — fires high explosive and white phosphorous on pillboxes Tare, Uncle, and Victor until lifted on call. Mortars, 4.2's and 81's, fire high explosive on pillboxes Roger and Sugar until lifted when the assault platoons approach the antitank ditch. The 60's are in general support today and will fire on targets of opportunity.

"A section of heavy machine guns on the right — marked on your papers — fire at the embrasure in pillbox Roger and lift to pillbox Tare when we breach the wire in front of pillbox Roger or when we throw a yellow smoke grenade near Roger. The section of 75's marked on your sketches fire at the embrasures of pillboxes Roger and Sugar.

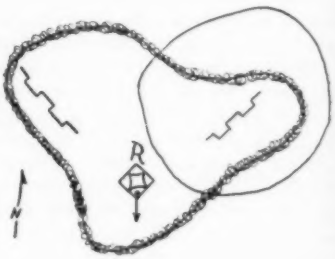
"The right section of tanks — Numbers 1, 2, and 3 — fire at the embrasures of pillboxes Roger and Tare. The left section — Numbers 4 and 5 — fire at pillbox Sugar.

"The mission of this platoon, with the 3d 57-mm Rifle Squad attached, is to capture pillbox Roger and to be prepared to continue the attack on order and capture pillboxes Tare and Victor. Underline that mission in your notes.

"I've shown you the line of departure. The formation will be platoon line, 2d Squad on the left, assault team in the center, and 3d Squad on the right. The direction of attack is 15°. The time of attack, 1430. Our platoon zone of action includes pillboxes Roger, Tare, and Victor."

He looked around. "Shall I repeat any of that? . . . No? Okay, then.

"Mons, your assault team — consisting of your squad plus the four men of the rocket launcher team — is the base unit. Move directly to the antitank ditch in front of pillbox Roger as fast as possible. Once there, breach the barbed wire and assault the pillbox. Be sure to have the first bangalore torpedo man, after he has blown a gap in the wire, guard the flame thrower. Reorganize in the bomb craters and trench northeast of the box — here." He drew a line around the area on Sergeant Mons' sketch.

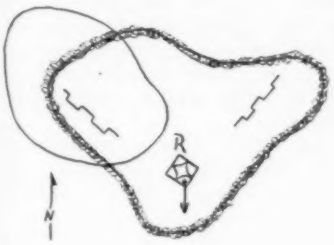


"Have one flame thrower guard the entrance in rear of the pillbox until relieved by the 3d Squad."

He looked over at the leader of the 2d Squad.

"Your squad is the left unit in the platoon line formation as we advance to the antitank ditch. Once in the ditch, take up positions to fire on the trench and craters on the *west* side of the pillbox and protect our left flank. When the pole charge goes off in the embrasure, advance through the gap we cut in the wire and assault the trench and craters *west* of the box. Reorganize there."

Again he drew a line, this time around an area on the 2d Squad leader's sketch, and said: "That's the area."



"Now for the 3d Squad," continued the officer. "You're the *right* unit in the platoon line formation as we advance to the ditch. Once there, take up positions to fire on the trench and craters *east* of the box. Reorganize in the craters in front — that is, south — of the box and in the defiladed entrance at the rear of the box. Clear the box if you can gain entrance. The company support platoon will send up a party to relieve your guard on pillbox Roger after we capture pillbox Tare, our second objective."

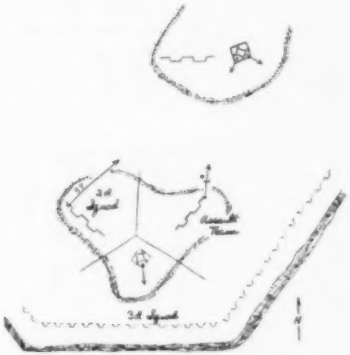
He paused before giving instructions to his machine gun team leader:

"Take up a position as shown on your sketch. Fire at the embrasure on pillbox Roger until your fire is masked. Then displace immediately and take up a position at A. In the reorganization, take up a position in the trench with the assault team and fire at the embrasures of pillbox Tare.

"Now for the 57 — Sergeant, go into the position shown on the sketch. Fire on the embrasures of pillbox Roger until your fire is masked. Displace immediately after that to position B. In the reorganization, join the 2d Squad in its trench and fire at the embrasure of pillbox Tare."

His next words he addressed to everyone: "Our reorganization, when completed, will look like this."

He drew rapidly on his sketch and then passed the result around among them.



Area subdivided for platoon reorganization.

"We are already organized and equipped for this attack. Check your men once again for proper equipment and loads. Resupply probably won't be until tonight — and then on the position by carrying party. The aid station is just east of where our present assembly area is located.

"A yellow smoke grenade means to lift all direct fire weapons from whatever pillbox is under assault. A yellow panel will be spread on

the south, *friendly* side of each pillbox after its capture. The 3d Squad will carry the panels.

"I'll be with the assault team. The platoon sergeant, with the 2d Squad. The assistant platoon sergeant, with the 3d Squad on the right.

"It is now 1231. . . . Are there any questions?"

"We'll move from the attack position to the line of departure in column formation?" Mons asked.

"Right — platoon column, in the order — assault team, 2d Squad, 3d Squad."

"And the light machine gun and 57-mm rifle, sir?" A noncom asked.

"You two will move out of the attack position ahead of us — so that you can be in position at H-hour."

After one or two more questions the little group separated, the squad leaders to make their own reconnaissance, the lieutenant to contact the company commander and the other platoon leaders for further coordination of his plan of attack.

It was about 1325 when Lieutenant Adams rejoined the platoon back in the assembly area, arriving in time to hear Sergeant Mons complete his order to the assault team. The other squad orders were already finished and the men resting or busy making last minute checks.

The lieutenant made a round of the platoon himself and found his men ready.

At 1400 the first rounds of the preparatory fires passed overhead, to fall on the unseen ridge to the north where the enemy's pillboxes lay in sullen menace behind their obstacles of barbed wire and dragon's teeth and deep antitank ditch. More and more friendly artillery and mortars joined in, and to the men in the asembly area the rain of shells soon settled into a rolling beat of dull, reverberating sound.

When they moved up a little later to the attack positon, the fury of the preparatory fires seemed only to increase. The woods around them were filled with the sound of the hell that was at work on the ridge.

Lieutenant Adams had to raise his voice when he ordered the light machine gun and the 57-mm rifle: "Move on out!"

The two little groups of men jumped forward and disappeared quickly into the woods on the other side of the road. They would be in firing position ready to support the assault when the rest of the platoon crossed the line of departure at 1430.

There was no undue waiting at the attack position for the men left behind. Eye glued to his watch, Lieutenant Adams almost immediately waved them forward, across the road, and down through the last remaining trees to the line of departure.

The squads shook out quickly into a platoon line formation and at 1430 on the second broke out from the edge of the woods and headed across the open. The men now saw the ridge to their front clouded with smoke and dust. The ground up ahead writhed and shook under a rain of shells.

The antitank ditch and dragon's teeth seemed a long way off. Lieutenant Adams quickly found himself panting for breath as he half walked, half trotted toward them across the open ground.

Halfway across the field the pla-

toon's fine initial formation began to weave and change as parts of the line went faster or slower than the rest. Lieutenant Adams saw an enemy shell land full on the 3d Squad on the right, saw the shell's sudden puff of angry black smoke blossom and open among his men, and yet found most of the line on that side still advancing when the explosion was gone. One of the flame thrower men stumbled and fell. He lurched back to his feet with difficulty and hobbled awkwardly after the receding figures of the platoon.

Suddenly mortar shells were no longer falling around the closest pillbox. Lieutenant Adams offered silent thanks for the situation which gave the company commander a perfect view of the assaulting troops throughout their advance, so that he could lift those supporting mortars even without a call from the assault platoons.

The first men reached the antitank ditch, tumbled in, and struggled to firing positions on the far side. In the instant when he himself entered the ditch, Lieutenant Adams saw with relief that his silent dread of barbed wire or antipersonnel mines inside was unfounded. The ditch provided exactly the covered position his platoon needed for its assault against the first pillbox.

In a minute the entire platoon was strung out in the ditch. Sergeant Mons and the first bangalore torpedo man snaked their way out of the ditch and across the dragon's teeth to the concertina wire. With the bangalore torpedo thrust full under the wire, Mons himself pulled the igniter and slipped back into the cover of a nearby bomb crater.

Lieutenant Adams heard the crack of small-arms fire passing overhead and saw and heard the angry splat of the rounds about the pillbox embrasure. Before the bangalore torpedo exploded with a roar, blowing a gap through the wire, he had time for a hurried glance at the AR team, the rifle grenadier, and the rocket launcher team. All were busy hurling fire at the pillbox embrasure.

With the explosion which tore a hole in the barbed wire, the rocket launcher team fired one last white phosphorus round directly into the embrasure.

One of the men carrying a flame thrower climbed out of the ditch then, threaded his way across the dragon's teeth, and pushed through the gap. Close behind came the man named to guard him — the bangalore torpedo bearer whose charge had just torn the hole in the wire. Bent over under the weight of his burden, the flame thrower man lumbered, ugly and terrible, toward the pillbox. He came to a stop over to one side of the firing embrasure, well protected from any fire from it. Smoke from the rocket launcher's white phosphorus round still belched and billowed from the opening.

A sudden stream of fire spat out from the nozzle-like gun in the man's hand, engulfing the opening in hot yellow flames. Two short bursts of flame he shot in safety from that angle to the side of the embrasure, and then moved over directly in front of the embrasure. Hot flames again roared out and swept into the box.

He let go of the trigger then and

made way for a pole charge man. Even as the flame thrower man was seeking cover in a nearby bomb crater, this new member of the team thrust his charge into the embrasure, propping the pole so that the charge was jammed into the opening and no push from inside could shove it away. He pulled the igniter with deliberate movements and then turned away and tumbled into the same crater with the flame thrower.

Seconds later the charge tore itself apart with a powerful explosion, wrecking the embrasure.

As though at a signal the remainder of the assault team now poured from the ditch and through the gap, to charge past the smoking dead box to the craters and trench and entrance in its rear.

The 2d Squad followed, charging over its assigned part of the objective. In the trench in its zone the 2d Squad took two enemy soldiers prisoners. Someone was yelling and there was a confusion of noises and shots and explosions.

The 3d Squad leaped out of the antitank ditch and in its turn came whirling in to its assigned area. But by then the work was almost finished.

The air stung the men's nostrils with the ammoniac smell of exploded and burned shells as they mopped up and swung into reorganization. On the ground just below the torn and wrecked pillbox embrasure, unused flame thrower fuel burned with a low roar of angry flames. . . .

It was still burning minutes later when members of the 3d Squad unrolled on the ground in front of the pillbox a large yellow panel, careful not to get any part of it in the dying fire.

Meet the Authors

QUARTERLY standby, Captain Charles K. Blum, scores again in this issue with "Attack of a Fortified Position." This is his fifth consecutive QUARTERLY article. For the past three years an instructor at The Infantry School, he departed recently for overseas.

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Captain Frank F. Rathbun is no newcomer to the QUARTERLY. Two earlier articles, both about training films, appeared in the April 1950 and January 1951 issues. Captain Rathbun served with the 6th Division in the Pacific from 1943 to 1945. Following the war, he served a tour of duty in Japan, and for the last two years has worked in the Training Publications Department at The Infantry School, coming to the QUARTERLY Staff in January of this year.

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Major Robert G. Kimball drew upon combat experience gained in two theaters for his article, "Rifle Company as Support of an Advance Guard." Major Kimball served 19 months in the Southwest Pacific with the 27th and 37th Divisions as a machine gun sergeant. Returning to the United States to attend OCS, he crossed to the European side in May 1944 as a second lieutenant to lead platoons in the 20th and 102d Divisions. He came to Fort Benning in the Advanced Class of 1948-49 and remained as an instructor in company offensive tactics after graduation.

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Lieutenant Colonel Arthur P. Murphy, author of "Principles of Anti-Guerilla Warfare," was on duty with the 7th Division on Luzon when the Japanese struck in 1941. After his unit was cut off from Bataan, Colonel Murphy and his men returned to northern Luzon and became part of the guerilla forces there. This force eventually grew to 20,500 officers and men. Colonel Murphy was its G2 and later chief of staff.

Since 1945, Colonel Murphy has served in the G2 section of the 6th Army and the G2 section of TRUST in Trieste. He arrived at Benning in July 1950 to attend an Advanced Class and was immediately drafted to write training literature on guerilla forces. He is now an instructor in the Tactical Department. His subjects: Guerillas, their tactics, defense against, etc.

Captain Robert H. Philips, author of "Have They Met the Test?," graduated from West Point in 1946. In 1947 he went to Korea with the 20th Infantry, 6th Division. He returned to the States in January 1949 and was assigned to the Weapons Department, The Infantry School. Since that time he has worked with the Recoilless Weapons Committee.

Lt Col Takeo Oyama, of the Military College of Infantry, Chiba, Japan, visited The Infantry School today.

— *Infantry School Diary*, 22 September, 1930

LETTERS

I have just read Major Fritter's article on the 105-mm recoilless rifle, which I found most instructive. But I wonder how this proposed new squad, with its vehicles, will operate under combat conditions. It seems that when this weapon is used in its primary role as a direct fire weapon, it will have to displace immediately after firing, as in the case of the 57-mm or 75-mm recoilless rifle. How can this be accomplished rapidly with two ¼-ton trucks, one ¼-ton trailer and maybe an M22 carriage? Are there any reasons why this weapon cannot be mounted on some other vehicle, like the ¾-ton truck, that could carry the weapon, ammunition, and a smaller gun crew on one vehicle? The other driver and ammunition bearer could be eliminated this way and still not affect the operation of the weapon.

Lt Weapons Platoon

Your point is well taken. The answer, in essence, is that the ¼-ton truck is not the ideal mount for the 105-mm rifle, but it has proved to be the best of the vehicles presently available. As to displacement, it is a matter of making the best of a condition which is not wholly satisfactory. Since the ¼-ton truck which mounts the weapon can carry a maximum of five rounds of ammunition, an additional vehicle for each weapon, or possibly one for each two weapons, is required.

The desirability of mounting the weapon on another vehicle which could carry the ammunition and a complete crew (smaller than the proposed squad) is recognized. The ¾-ton truck is not satisfactory because its silhouette is too high and, under certain conditions, it lacks the battlefield mobility of the jeep. More important, however, is the fact that the ¾-ton truck is too long. If the weapon is placed far enough to the rear to prevent backblast damage to the rear and sides of the vehicle the muzzle blast damages the hood. If placed far enough forward to prevent damage to the hood, the rear of the vehicle is damaged by the backblast.

Probably the most desirable solution to the entire problem would be a small, mobile, low-silhouette vehicle capable of carrying a complete crew and ammunition. The development of such a vehicle is a current project.

I was delighted to see an article on "The Penetration" in your last issue of the QUARTERLY. *It was, I am happy to say, as penetrating as the subject matter itself.*

It has always seemed to me that the envelopment — as far as small unit tactics are concerned — has been emphasized way out of proportion to the number of times it is used on the battlefield when compared with the penetration.

First as a small unit commander (rifle platoon and rifle company)

and later as a staff officer (regimental S3), I ran into far more situations which demanded *a penetration than I did situations which* permitted *an envelopment. The chief reason for this was that more often than not my unit was an interior unit of a larger force. And I feel that the same condition is bound to have been true with other small units. After all, there are only two heels to a loaf of bread, but a whole lot of slices in between!*

I trust that Lieutenant Colonel Reynolds' article is a harbinger of a more realistic trend in the teaching of small unit attack tactics. Let's stop kidding the small unit commander that he's going to run into conditions that are more likely to favor the envelopment than the penetration. The history of small unit encounters doesn't seem to bear that out.

Lt Col, Infantry

Your interest in the "Penetration" article is gratifying. You are right in believing that interior units frequently have no choice other than frontal attack.

The Infantry School emphasizes *both* the envelopment and the penetration in its offensive tactics instruction. The underlying idea could be stated that we envolop when we can, and we penetrate when we must.

Lieutenant Colonel James H. Reynolds' "The Penetration as a Form of Maneuver" in the April issue of the QUARTERLY *reviewed and "refreshed" the particularized use of the line buck at the enemy middle as a substantial form of maneuver, but it left one question in my mind. The question: Should the next-to-the-last paragraph (closing phrase) on page 121 read (as set in print in the* QUARTERLY*)*— " . . . so does the combat commander estimate the situation that confronts him before deciding whether to develop or penetrate"; *or should it have been* " . . . so does . . . before deciding whether to envelop or penetrate?"

2d Lt, Infantry

Envelop is right, Lieutenant. Your eyes are sharper than the editor's and his proofreaders who let the wrong word slip past.

I have some ideas that I would like to submit in regard to combat soldiers. An Infantryman in combat is given a combat badge and ten dollars a month. The ten dollars a month, however, is only incidental, for you cannot pay these men enough money to recompense them for being in combat, fighting the enemy, dodging shells, living in the mud of a slit trench, eating K rations day after day, or C rations, or sometimes not even that.

The Medics, too, have achieved this small measure of distinction. But what about the other branches of the Army that are in combat also, namely, the Chaplains, Artillerymen, Engineers, Tankers, and Reconnaissance elements? These men are soldiers in combat. Let us look at them.

The Artillery always has their observers near the OP and with them their radio operators and linemen. These men are as far forward at times as anyone else. Even the battery is working in close support of the Infantrymen. Are we to tell these men that they are no different than artillerymen in the States?

Now, the Engineers are really

an outfit. If we come to a bridge blown out, whom do we ask for? It makes no difference if the enemy is only a short distance away, the Engineers come in and give us a by-pass. The Engineers are always working on roads, removing demolitions and mines, and making new roads. The Infantryman does a lot of this work himself, but still the Engineer is a combat soldier.

As for the Tankers and Recon's, everyone is aware how they assist the Infantry, sometimes forward of the Infantrymen and many times along with them.

To sum it all up: These other branches of the service are all soldiers active in combat, but what recognition do they have to set them apart from distinctly non-combatant soldiers in the rear echelons? My idea is a specially designed badge for all combat and non-combatant soldiers who directly support the Infantry. For this badge I suggest that we take our Infantryman's Combat Badge as the basic design, remove the rifle, and in its place substitute a silver "C" — for combat. The color of the

Infantry — blue — would serve as a background of the badge to show the Infantryman's appreciation of the wonderful support of all these supporting units. This same badge could be issued to all the branches of supporting units active in combat. To illustrate what might be done in this regard, I am attaching a suggested design for a badge.

Capt, Infantry

It takes an Infantryman to appreciate a fellow fighting man. Your suggestion, Captain, is magnanimous. We pass it along to our readers for their comments.

Captain Blum has rung the bell again with his excellent article entitled "Rifle Platoon in a Night Attack" which appeared in your April issue.

As with Captain Blum's previous articles, I used this one too as a basis for a field training problem for my platoon. And as before, the problem went off first-rate. The men and I learned a lot — and we got quite a kick out of it to boot. It was just like playing a game which depends primarily on teamwork for success.

Keep Captain Blum writing!

Lt George Jay

We'll keep Captain Blum writing if last minute exhortations will do the trick. Our prize author departed The Infantry School for an overseas assignment a few weeks ago. He promises to keep the QUARTERLY on his list if his new job will permit.

Your QUARTERLY article by Captain R. E. Womer, "Communications on Extended Frontages," was interesting. I am confident that most commanders today, including leaders of companies and platoons, realize that abnormal frontages are quite apt to become the rule in most actions for some time to come.

But, I wonder if the communication outlook is as dark as Captain Womer paints it. To risk over-

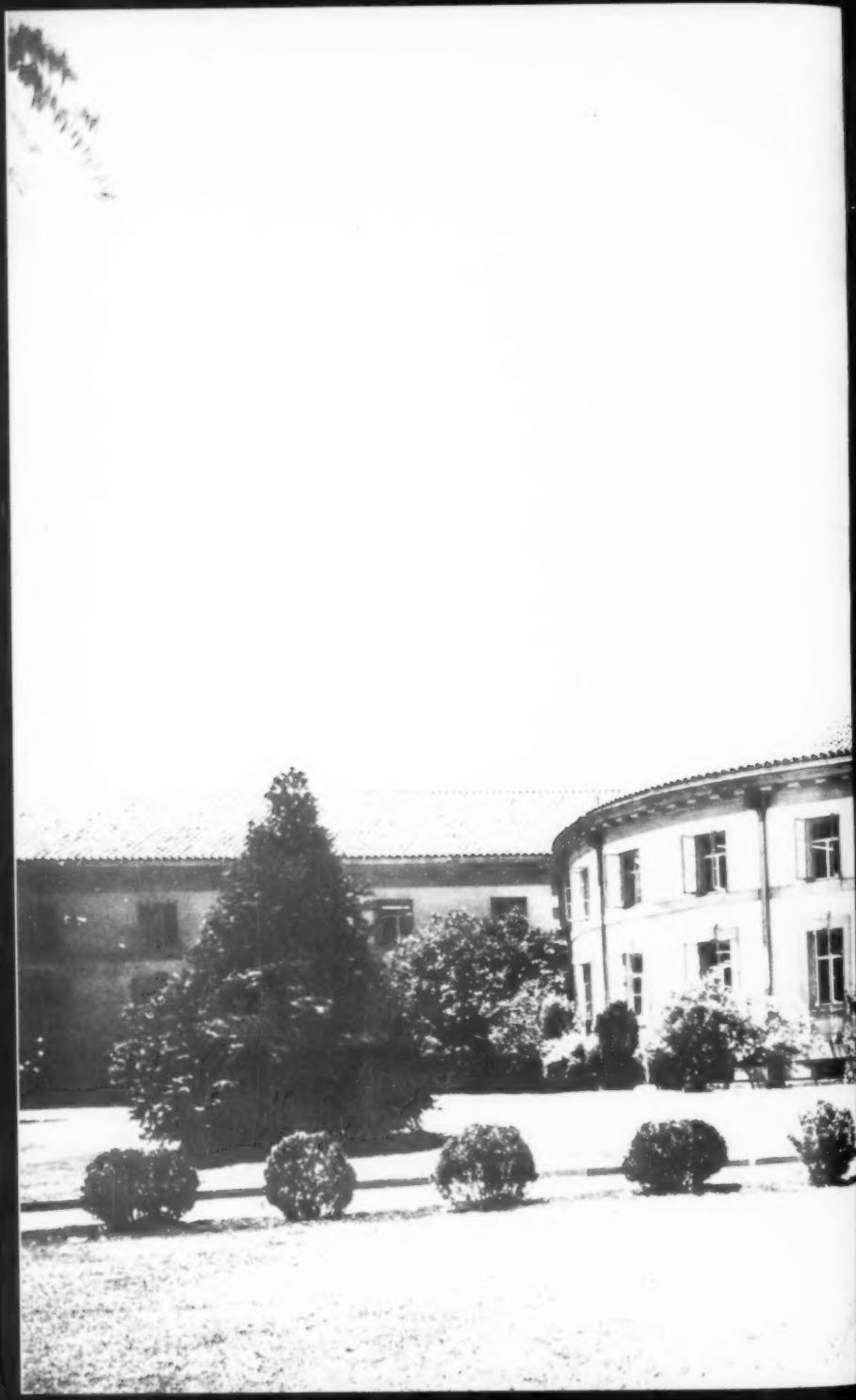
simplification, tactical principles come to mind:

(1) In defense on an extended frontage we envision occupation of critical terrain features with strong, balanced, self-sustaining units in insular defense. In this system we do not appreciably extend frontages within the strong points. It is feasible that most normal radio nets can be maintained in each defense island.

(2) In the attack from an extended front, we must possess momentary — if not a prolonged — degree of initiative. That is, as the attacker, we choose the time, place, direction, and zone in which we attack. In order that the attack be successful we do not dissipate our force in a large area nor do we attack piecemeal. Again, within regimental units, we can expect to operate our normal communication nets.

These instances, of course, are the ideal in extended frontage operations. I grant there will be exceptions. When they occur, I believe relay systems to be the most desirable solution when unusually long radio ranges are required. The addition of a few T/O&E sets per unit should suffice. I do not agree that the larger sets should be moved down the chain, but, rather, relay systems be used until newer, lighter, longer range sets are produced and in the hands of units.

Capt, Infantry

The "Movement by Air" article in the April QUARTERLY *was, I thought, quite pertinent. Despite the fact that people in high places are today talking glibly about moving whole armies by air, the truth is that the Army doesn't have enough trained people or enough background of experience in joint operations with the Air Force to make even a relatively small movement easily. The fact that the movements get made is more a tribute to the dogged determination of the people in the lower echelons, both on the ground and in the air, than to the smooth working of the system. As more and more officers become aware of the complexities involved in air transport, there will be an ever increasing demand for the training, working agreements, etc., now lacking and for which such a critical need exists.*

Major Raudstein mentions the importance of the liaison officer's getting firm commitments on the number of aircraft that will be available and the maximum load that can be carried in each aircraft. The liaison officer that can succeed in getting such commitments earlier than 15 minutes before take-off time is a jewel "of purest ray serene" and should be kept on permanent liaison duty until that happy day when everybody in the Army concerned with air movements is talking the same language and the Army and Air Force are in perfect agreement.